

Jurisdiction: KIRKLAND Project Name: SB13 Carillon Pt Application ID: 236437



Supplemental Name: Questions for Staff

Do you have any specfic questions for the Building Department?

What permits are required? What documents are required to be submitted in order to obtain these permits? What would the fees be, for a project valued at \$15,000?

Do you have any specfic questions for the Fire Department?

What permits are required? What documents are required to be submitted in order to obtain these permits? What would the fees be, for a project valued at \$15,000?

Do you have any specfic questions for the Planning Department?

What permits are required? What documents are required to be submitted in order to obtain these permits? What would the fees be, for a project valued at \$15,000?

Do you have any specfic questions for the Public Works Department?

What permits are required? What documents are required to be submitted in order to obtain these permits? What would the fees be, for a project valued at \$15,000?

Do you have any other questions?

What permits are required? What documents are required to be submitted in order to obtain these permits? What would the fees be, for a project valued at \$15,000?

Supplemental Name: Additional Contact Information

Enter Applicant's Email Address:

jlondon@rykaconsulting.com

AN ELECTRONIC COPY OF OR A WEB LINK TO THE STAFF REPORT, MEETING AGENDAS AND THE NOTICE OF FINAL DECISION WILL BE EMAILED TO THE APPLICANT AT THE ABOVE LISTED EMAIL ADDRESS. IF YOU PREFER TO RECEIVE A PAPER COPY, THEY ARE AVAILABLE UPON REQUEST. PLEASE INDICATE IF YOU WOULD ALSO LIKE A COPY OF THESE MATERIALS TO BE SENT TO THE PROPERTY OWNER'S EMAIL ADDRESS:

No

If Yes, please enter Owner's Email Address below. If No, please enter N/A:

N/A

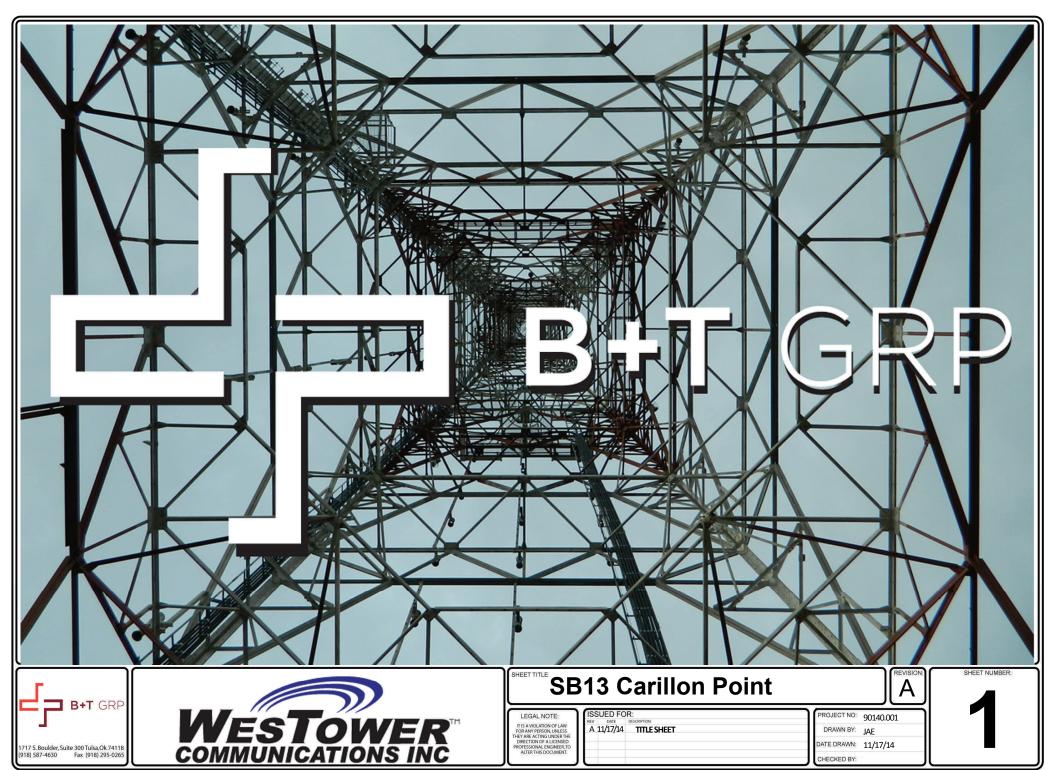
Supplemental Name: Right to Enter Property/Hold Harmless Agreement

AUTHORITY TO ENTER PROPERTY/HOLD HARMLESS AGREEMENT – READ CAREFULLY BEFORE CLICKING AGREE AND ENTERING NAME BELOW

I/we acknowledge that by clicking Agree below and submitting this application I/we are authorizing employees or agents of the City of Kirkland to enter onto the property which is the subject of this application during the hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, for the sole purpose of making any inspection of the limited area of the property which is necessary to process this application. In the event the City determines that such an inspection is necessary during a different time or day, the applicant(s) further agrees that City employees or agents may enter the property during such other times and days as necessary for such inspection upon 24 hours notice to applicant(s), which notice will be deemed received when given either verbally or in writing.

I/we acknowledge that by clicking agree below and submitting this application I/we certify under penalty of perjury, the truth and/or accuracy of all statements, designs, plans and/or specifications submitted with said application and hereby agrees to defend, pay, and save harmless the City of Kirkland, its officers, employees, and agents from any and all claims, including costs, expenses and attorney's fees incurred in investigation and defense of said claims whether real or imaginary which may be hereafter made by any person including the undersigned, his successors, assigns, employees, and agents, and arising out of reliance by the City of Kirkland, its officers, employees and agents upon any maps, designs, drawings, plans or specifications, or any factual statements, including the reasonable inferences to be drawn therefrom contained in said application or submitted along with said application.

I certify (or declare) under penalty of perjury under the laws of the State of Washington that the above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.









AL NOTE:
DIATION OF LAW
PERSON, UNLESS
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N OF A LICENSED
NAL ENGINEER, TO
HIS DOCUMENT.

SSUED FOR:

REV DOKE DESCRIPTION

A 11/17/14 Aerial Map

PROJECT NO: 90140.001

DRAWN BY: JAE

DATE DRAWN: 11/17/14

2







LEGAL NOTE: IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

A 11/17/14 DESCRIPTION VIEW 1—BEFORE

PROJECT NO: 90140.001

DRAWN BY: JAE DATE DRAWN: 11/17/14







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REV DATE DESCRIPTION
A VIEW 1—AFTER

PROJECT NO: 90140.001

DRAWN BY: JAE

DATE DRAWN: 11/17/14

4







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PROFESSIONAL ENGINEER, TO
ALTER THIS DECUMENT.

REV DATE DESCRIPTION
A 11/17/14 VIEW 2—BEFORE

____(A

PROJECT NO: 90140.001

DRAWN BY: JAE

DATE DRAWN: 11/17/14

HECKED BY:

SHEET NUMBER

5







LEGAL NOTE: IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

A 11/17/14 VIEW 2—AFTER

PROJECT NO: 90140.001 DRAWN BY: JAE

DATE DRAWN: 11/17/14



July 11, 2014



B+T Group 1717 S. Boulder, Suite 300 Tulsa, OK 74119 (918) 587-4630 btwo@btgrp.com

Ms. Maurine Irvine-Trujillo Ryka Communications, LLC 918 S. Horton St., Ste 1002 Seattle, WA 98134 (206) 523-1941

Subject: Structural Analysis

Carrier Designation: Carrier Site Number: 11462-A
Carrier Site Name: Carrillon PT

Ryka Communication, Designation: Site Number: SB13
Site Name: Carillon PT

Engineering Firm Designation: B+T Group Project Number: 90140.001.02

Site Data: 2000 Carillon Point, Kirkland, WA, King County

Latitude 47.65528°, Longitude -122.20611°

Rooftop Mounted Antennas at 65'

Dear Maurine Irvine-Trujillo,

B+T Group is pleased to submit this "Structural Analysis" to determine the structural integrity of the above mentioned water tower supported telecommunications site.

The purpose of the analysis is to determine acceptability of the existing platform and building to sufficiently support the telecommunications equipment presented in this report. Based on our analysis we have determined the suitability for the structure and foundation, under the following load case, to be:

Existing + Proposed Equipment

Sufficient Capacity

Note: See Table 1 and Table 2 for the proposed and existing loading, respectively.

The analysis has been performed in accordance with the Seattle Building Code, the ASCE 7 standard, and the 2012 IBC based upon a wind speed of 110 mph 3-second gust.

All equipment proposed in this report shall be installed in accordance with the drawings for the determined available structural capacity to be effective.

We at *B+T Group* appreciate the opportunity of providing our continuing professional services to you and *Ryka communications*. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted by: B+T Engineering, Inc.



Josh Griffin Project Engineer John W. Kelly, P.E., S.E. Vice President

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1) INTRODUCTION

The proposed telecommunications equipment will be located on an existing penthouse located on the building rooftop. There are existing telecommunications antennas mounted on the penthouse wall. The proposed loading consists of replacing (4) antennas and adding (6) new antennas and their associated equipment.

2) ANALYSIS CRITERIA

The structural analysis was performed for this structure in accordance with the 2012 International Building Code and the ASCE 7 Design Standard. The TIA-222-F and TIA-222-G apply to telecommunications towers. Although telecommunications equipment is present, this structure is primarily a building and is more appropriately assessed with the ASCE 7 Standard. The design wind speed for this location is 110 mph 3-second gust.

Table 1 - Proposed Antenna and Cable Information

Table 1 - Proposed Antenna and Cable Information						
Mounting Level (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Type	Note
	1	Commscope	SBNHH-1D65A			
	1	Commscope	SBNHH-1D65B			
1	1	Commscope	SBNHH-1D65C			
	1	Alcatel Lucent	3JR52701AAAA			
	1	Alcatel Lucent	3JR52702AAAA			
	1	Alcatel Lucent	3JR52703AAAA			
	3	Alcatel Lucent	AWS RRH (internal)			
65	6	Alcatel Lucent	RRH4x25-WCS (external)	3	Fiber	
	3	700 MHz RRH (external)	700 MHz RRH (external)	3	Fiber	
	5	Kathrein	742-264	14	7/8"	2 extra coax remain
	6		LGP 21401 (TMA)			
	6	Nokia	MHA CS72993.08 (TMA)			
	1	Kathrein	80010764			

Table 2 - Existing and Reserved Antenna and Cable Information

Mounting Level (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Type	Note
	5	Kathrein	742-264	14	7/8"	
	1	Kathrein	80010764			
	6		LGP 21401 (TMA)			Equipment
	6	Nokia	MHA CS72993.08 (TMA)			to Remain
65	3		700 MHz RRH (external)	3	Fiber	
	1	KWM	AM-X-CD-16-65-00T-RET			
	1	Kathrein	739 684			Equipment to be
	1	Powerwave	P65-17-XLH-RR			Removed
	1	Powerwave	7721			

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
Photos		Date: 04/20/2014	B+T Group
Existing Loading	RFDS	Date: 03/03/2014	Dyka
Proposed Loading	KFD5	Date. 03/03/2014	Ryka
Structural Analysis	By CG Engineering	Date: 05/23/2002	Ryka
CD's	By LDC	Date: 12/28/2010	Ryka

3.1) Analysis Method

This building is a substantial structure and currently supports telecommunications equipment. four antennas will be removed and (6) new antennas will be added. The new antennas will be attached to the existing penthouse wall. There is no increase in exposed wind area since all the antennas are on the face of the penthouse. The increase in seismic load is negligible when compared with the overall demand of the structure. Calculations have been provided for the mounting of the antennas.

3.2) Assumptions

- 1) The structure was built in accordance with the designer's specifications.
- 2) The structure has been maintained and is free of damage.
- 3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
- 4) Existing loading was assumed based on final proposed loading.

This analysis may be affected if any assumptions are not valid or have been made in error. B+T Group should be notified to determine the effect on the structural integrity of the structure.

4) ANALYSIS RESULTS

4.1) Recommendations

1) The support system for the telecommunications equipment is structurally sufficient at this site.

APPENDIX A ADDITIONAL CALCULATIONS

PROJECT	SB13 - CARILLON PT				
SUBJECT	DESIGN CRITERIA				
DATE	07/11/14	PAGE	OF		



DESIGN CRITERIA

Code: International Building Code, 2012 Edition

ASCE 7-10

SEISMIC

I_e: 1.00

Occupancy Category: II

Site Class: D

 S_S : 1.27 g

S₁: 0.488 g

 S_{DS} : 0.847 g

 S_{D1} : 0.492 g

Seismic Design Category: D

a_p: 1

R_p: 2.5

$$\begin{split} F_p &= 0.4 a_p S_{DS} W_p (1 + 2z/h) / (R_p/I_p); & 0.407 \ W_p \\ F_p &= 1.6 S_{DS} W_p I_p; & 1.355 \ W_p \end{split}$$

 $F_p = 0.3S_{DS}W_pI_p$: 0.254 W_p

F_p: **0.407** W_p

WIND

V: 110 mph

Exposure: B

Risk Category: II

leight: 65.0 ft

K_z: 0.874

Topo. Factor, K_{zt} : 1.00

Direct. Factor, K_d: 0.95

 $(GC_r): 1.9$

 q_h =0.00256($K_z K_{zt} K_d V^2$): **25.7** psf

 $F_h = q_h(GC_r)A_f$: **48.85** A_f lbs

PROJECT	SB13 - CAR	JDG			
SUBJECT	ANTENNA LOADING				
DATE	07/11/14	PAGE	OF		



ANTENNAS

Exisiting

#	Manufacturer	Model	Height	Front Width	Side Width	Weight	C_f	P _w ((lbs)	P (lbs)
			(in)	(in)	(in)	(lbs)				
5	Kathrein	742-264	51.80	10.30	5.50	36.40	1.40	109	58	15
1	Kathrein	739 684	51.00	10.30	4.50	30.80	1.40	107	47	13
1	Kathrein	80010764_716	58.00	11.80	6.00	40.80	1.40	139	71	17
1	Powerwave	P65-17-XLH-RR	96.00	12.00	6.00	70.00	2.00	235	117	28
1	KMW	AM-X-CD-16-65-00T-RET	72.00	11.80	5.90	48.50	1.40	173	86	20
1	Powerwave	7721	55.00	6.60	3.50	14.30	2.00	74	39	6
6	Powerwave	LGP 21401	9.20	14.40	2.60	14.10	1.30	27	5	6
6	Nokia	MHA CS72993.08	14.00	10.50	3.10	17.00	1.40	30	9	7
	•									

New

#	Manufacturer	Model	Height	Front Width	Side Width	Weight	C_f	P _w ((lbs)	P (lbs)
			(in)	(in)	(in)	(lbs)				
1	Commscope	SBNHH-1D65B	72.00	11.85	7.10	50.71	1.40	174	104	21
1	Commscope	SBNHH-1D65C	96.00	11.85	7.10	66.14	2.00	232	139	27
1	Commscope	SBNHH-1D65A	55.00	11.85	7.10	40.92	1.40	133	79	17
1	Alcatel Lucent	3JR52702AAAA	80.00	13.40	16.50	152.10	1.40	218	269	62
1	Alcatel Lucent	3JR52703AAAA	96.00	13.40	16.50	163.80	2.00	262	322	67
1	Alcatel Lucent	3JR52701AAAA	60.90	13.40	16.50	137.80	1.40	166	205	56

PROJECT SB13-CAR	ILON PT	
SUBJECT ROOFTOP AN	ALYSIS	
DATE (57/11/14	PAGE	OF



H	11 111	V= 164 48	
A		H=322LB	
	DETALA		
MT-221 COM	MISCOFE MOUNT		
REF. ATTAC	HED RATING LE	TTER PROVIDED BY COMMSCOPE	
M 122-TM	bunt is rated	FOR 150 MPH WIND @ 200' AGL	
:. MT-221	MOUNT IS AC	CEPTABLE	
HILTI ADHESI	VE ANCHORS:		
LOAD PER	ANCHOR		
Vz=1+4	18=21 LB		
Vx = 322	18=4 LB		
VALOW = 10	45(0,52)=543 12		
(Z) 41) (543 543)	=0.11<1.0 CK		
(8) 3/8" & THE (3/8" MIN.	EMBED)	HILTI HIT-HY 70 SYSTEM IS ACCEPTABLE	



July 12, 2011

Tom Palmer Andrew Corporation 33 Union City Road, Unit 2C Prospect, CT 06712

Subject: MT-221L Adjustable Hollow Wall Mount with 4 1/2" OD Pipe Mount

Dear Mr. Palmer,

Per your request, we have performed a structural analysis for the adjustable antenna wall mount referenced above. It is our understanding this kit consists of the following Andrew Corporation parts:

- 1. (2) MT221L Adjustable Hollow Wall Mount Brackets w/ 5/8" Ø A36 U-Bolts (1 per bracket)
- 2. (1) -4 1/2" OD x 0.237w x 12' long A53 Gr. B Pipe

The analysis was performed using the following design criteria and loading conditions:

Design Standards:

ANSI/TIA 222-G, 2006 IBC, ASCE/SEI 7-05, 2007 FBC w/2009 Suppl.

Design Loading:

(1) – 4' HP Microwave, C.L. @ 200' \pm AGL (Arrangement 2)

Design Wind:

150 mph (3-Sec Gust), Exp. D per 2009 IBC, ASCE/SEI 7-05,

& 2007 FBC w/2009 Suppl.

150 mph (3-Sec Gust), Exp. D, SC III, Topo. 1 per ANSI/TIA 222-G

Materials:

Pipes:

ASTM A53, Gr. B ($F_v \ge 35 \text{ ksi}$)

U-Bolts:

ASTM A36 ($F_y \ge 36 \text{ ksi}$)

Plates:

ASTM A36 ($F_v \ge 36 \text{ ksi}$)

Based on our analysis, we have determined the antenna wall mounting kit is structurally adequate for the loading and conditions shown. The analysis assumes a vertical separation between the wall brackets of 10', and the antenna attachment centered between the upper and lower wall brackets.

The maximum anticipated reactions at each wall bracket are as follows:

Horizontal Compression / Tension: 1.150 lbs.

Horizontal Shear:

1.150 lbs.

Vertical Shear:

150 lbs.

The maximum anticipated tension on any single anchor is approximately 1,360 lbs.

If you have any questions relating to the above information, please contact me at (503) 587-0101.

Sincerely,

Adrian McJunkin, PE

President

PO Box 7293 • Salem, OR 97303 • 503.587.0101 • fax 503.316.1864 www.wscengineering.com No. 48771

STATE OF

FLORIDA

STATE OF

FLORIDA

SONAL



SB13 **CARILLON PT**

2000 CARILLON POINT KIRKLAND, WA 98033 KING COUNTY

RFDS REV: RFDS DATE: 12/19/14

PROJECT SUMMARY

PROPERTY OWNER: CARILLON PROPERTIES ADDRESS: 3240 CARILLON POINT KIRKLAND, WA 98033

47° 39' 22.5" N LATITUDE: LONGITUDE: 122° 12' 25.3" W TOP OF STRUCTURE: ±67'-7" AGL BASE OF STRUCTURE: ±21.3' AMSL

CODE INFORMATION:

ZONING CLASSIFICATION: COMMERCIAL (PLA 15A)

BUILDING CODE: IBC 2012 CONSTRUCTION TYPE: IIR

OCCUPANCY: S-2

JURISDICTION: CITY OF KIRKLAND PROPOSED BUILDING USE: TELECOMMUNICATIONS

PARCEL INFORMATION:

1725059058 PARCEL NUMBER:

AREA OF PARCEL: ±494,841.60 SQ. FT. (±11.36 ACRES) PROJECT AREA: ±152 SQ. FT. (EQUIPMENT SHELTER)

NEW IMPERVIOUS AREA: 0 SQ. FT.

A.D.A. COMPLIANCE: FACILITY IS UNMANNED & NOT FOR HUMAN HABITATION PARKING REQUIREMENTS ARE UNCHANGED. (NON ASSIGNED TECH PARKING) TRAFFIC IS UNAFFECTED.

PROJECT TEAM

A&E FIRM:

2737 78TH AVENUE SE, SUITE 202 MERCER ISLAND, WA 98040 LISA TAYLOR: (501) 317-6851

CUSTOMER/ **APPLICANT**

AT&T MOBILITY CORPORATION 16221 NE 72ND WAY, RTC 3 P.O. BOX 97061 REDMOND, WA 98052

BUILDING OWNER: CARILLON PROPERTIES 3240 CARILLON POINT KIRKLAND, WA 98033

(425) 822-1700

CONSULTANT WESTOWER COMMUNICATIONS

SITE ACQ .: 7526 SE 24TH ST. SUITE 500 MERCER ISLAND, WA 98040

PROJECT LEAD: SYLVIA RANDAL

(425) 941-5941

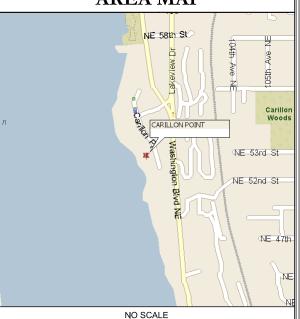
CONSTRUCTION MANAGER: TRASK SIMONET (425) 999-7306

(206) 523-1941

RACHEL TITUS rtitus@rykaconsult (206) 851-9477

RF ENGINEER: KEN MOTT (206) 829-0075

AREA MAP



LOCATION MAP



LEGAL DESCRIPTION

POR GL 1 & 2 & BLKS F & G OF THE 2ND SUPL PLAT OF LK WN SH LDS TGW 2ND CL SHLDS ADJ ALL LY WLY OF W MGN LK WN BLVD-LESS POR N OF S LN OF N 1076.80 FT SD GL 1 & ITS WLY PROD - LESS POR THOF S OF LN BEG AT NXN 1902.66 FT S & PLW N LN GL 1 & W MGN LK WN BLVD TH S 03-09-13 E ALG W MGN 75 FT TO TPOB OF DESC LN TH N 88-35-53 W TO INNER HARBOR LN & TERMINUS THIS LN - LESS POR CONV BY REC 8907281497 AKA LOT B KK ALT LL #LL-91-50 REC 9104302101

PROJECT DESCRIPTION

DRIVING DIRECTIONS

FROM SEA-TAC AIRPORT MERGE ONTO I-405 (NORTH).

108TH AVE NE. TAKE THE 1ST LEFT ONTO NORTHUP WAY TAKE THE 1ST RIGHT ONTO LAKE WASHINGTON BLVD NE.

TURN LEFT AT ACCESS DRIVEWAY. TAKE THE 1ST LEFT

ONTO CARILLON POINT. ARRIVE TO SITE, SITE IS ON

RIGHT HAND SIDE.

TAKE EXIT 14 TO MERGE ONTO WA-520 W TOWARD SEATTLE. TAKE THE 108TH AVE NE EXIT. TURN RIGHT AT

THE PROPOSED PROJECT INCLUDES: • REMOVE & REPLACE (4) ANTENNAS AT 65'-0".

DO NOT SCALE DRAWINGS

ALL DRAWINGS CONTAINED HEREIN
ARE FORMATTED FOR 11X17.
CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

> SEE SHEET GN-1 & GN-2 FOR ADDITIONAL CONSTRUCTION NOTES

SHEET #	SHEET DESCRIPTION	REV. #
T-1	TITLE SHEET	2
GN-1	GENERAL NOTES	2
GN-2	GENERAL NOTES	2
C-1	OVERALL SITE PLAN	2
C-2	ENLARGED SITE PLAN	2
C-3	EXISTING & PROPOSED BUILDING ELEVATIONS	2
C-4	DETAIL SHEET	2
C-5	DETAIL SHEET	2
G-1	GROUNDING NOTES	2
G-2	GROUNDING PLAN	2
G-3	GROUNDING DETAILS	2
RF-1	EXISTING & PROPOSED ANTENNA PLANS	2

DRAWING INDEX

A/E DOCUMENT REVIEW STATUS

9	CONSULTANT GROUP SIGN OFF	SIGNATURE	DATE
e.	CONSTRUCTION COORDINATOR:		
لــ	LANDLORD'S REPRESENTATIVE:		
٦	PROJECT MANAGER		
	SITE ACQUISITION:		
	AT&T SIGN OFF	SIGNATURE	DATE
	RF ENGINEER:		
	INTERCONNECT:		
	OPERATIONS:		
	COMPLIANCE:		
	CONSTRUCTION MGR:		
	PROJECT MANAGER:		
- II			

ACCEPTED: WITH OR NO COMMENTS, CONSTRUCTION MAY PROCEED

NOT ACCEPTED: RESOLVE COMMENTS AND RESUBMIT

ACCEPTANCE DOES NOT CONSTITUTE APPROVAL OF DESIGN, CALCULATIONS, ANALYSIS, TEST METHODS OF MATERIALS DEVELOPED OR SELECTED BY THE SUBCONTRACTOR AND DOES NOT RELIEVE SUBCONTRACTOR FROM FULL COMPLIANCE WITH CONTRACTUAL OBLIGATIONS.



CALL WASHINGTON ONE CALL (800) 424-5555 **CALL 3 WORKING DAYS BEFORE YOU DIG!**









SB13 **CARILLON**

2000 CARILLON POINT KIRKLAND, WA 98033

> **EXISTING** ROOFTOP

PROJECT NO:	90140.001	
CHECKED BY:	LRT	

ľ		ISSUED FOR:			
H	REV	DATE	DRWN	DESCRIPTION	
Ш	Α	4/24/14	DGJ	PRELIMINARY REVIEW	
Ш	В	8/26/14	DGJ	PRELIMINARY REVIEW	
Ш	0	8/27/14	DGJ	CONSTRUCTION	
Ш	1	11/14/14	DGJ	CONSTRUCTION	
Ш	2	1/6/15	DGJ	NEW RFDS	

B&T ENGINEERING, INC.



SHEET NUMBER:

GENERAL NOTES:

- THE CONTRACTOR SHALL NOTIFY CLIENT OF ANY ERRORS, OMISSIONS, OR INCONSISTENCIES AS THEY MAY BE DISCOVERED IN PLANS, DOCUMENTS, NOTES, OR SPECIFICATIONS PRIOR TO STARTING CONSTRUCTION INCLUDING BUT NOT OR SPECEFICATIONS PRICE TO STARTING CONSTRUCTION INCLUDINGS, BUT NOT LIMITED BY, DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERROR, OMISSION, OR INCONSISTENCY AFTER THE START OF CONSTRUCTION WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF CLIENT CONSTRUCTION PROJECT MANAGER AND SHALL INCUR ANY EXPENSES TO RECTIFY THE SITUATION. THE MEANS OF CORRECTING ANY ERROR SHALL FIRST BE APPROVED BY CLIENT CONSTRUCTION PROJECT MANAGER.
- PRIOR TO THE SUBMISSION OF BIDS. CONTRACTORS INVOLVED SHALL VISIT THE JOB SITE TO FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE OPOSED PROJECT. CONTRACTORS PRIOR TO THE COMMENCEMENT OF PROPOSED PROJECT. CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR HAVING BEEN AWARDED THIS PROJECT SHALL VISIT THE CONSTRUCTION SITE WITH THE CONSTRUCTION/CONTRACT DOCUMENTS TO VERIFY FIELD CONDITIONS AND CONFIRM THAT THE PROJECT WILL BE ACCOMPLISHED AS SHOWN. PRIOR TO PROCEEDING WITH CONSTRUCTION, ANY ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER VERBALLY AND IN WRITING
- FOR COLLOCATION SITES: CONTACT BUILDING OWNER REPRESENTATIVE FOR PARTICIPATION IN BID WALK.
- DRAWINGS ARE NOT TO BE SCALED, WRITTEN DIMENSIONS TAKE PRECEDENCE, THIS SET OF DOCUMENTS IS INTENDED TO BE USED FO DIAGRAMMATIC PURPOSES ONLY, UNLESS NOTED OTHERWISE, THE GENERAL CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS FOUIPMENT LABOR AND ANY REQUIREMENTS DEFMED NECESSARY TO COMPLETE PROJECT AS DESCRIBED IN THE DRAWINGS AND OWNER'S PROJECT MANUAL.
- THE ARCHITECTS/ENGINEERS HAVE MADE EVERY FEFORT TO SET FORTH IN THE THE ARCHITECT SUBJOINTERS TAVE MADE EYERT EFFORT IT OSET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. CONTRACTORS BIDDING THE JOB ARE NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS. THE BIDDER SHALL BEAF THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE ARCHITECT/ENGINEER OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO SUBMISSION OF CONTRACTO PROPOSAL. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED OTHERWISE.
- DRAWINGS ARE NOT TO BE SCALED UNDER ANY CIRCUMSTANCE. CLIENT IS NOT RESPONSIBLE FOR ANY ERRORS RESULTING FROM THIS PRACTICE WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS.
- OWNER, CONTRACTOR, AND CLIENT CONSTRUCTION PROJECT MANAGER SHALL MEET OWNER, CONTRACTOR, AND CLIENT CONSTRUCTION PROJECT MANAGER SHALL JOINTLY TO VERIFY ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS
- THE CONTRACTOR SHALL PERFORM WORK DURING OWNER'S PREFERRED
- 10. THE CONTRACTOR SHALL PROVIDE CLIENT PROPER INSURANCE CERTIFICATES NAMING CLIENT AS ADDITIONAL INSURED, AND CLIENT PROOF OF LICENSE(S) AND PE & PD
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND ROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- ALL WORK PERFORMED ON THE PROJECT AND MATERIALS INSTALLED SHALL BE IN ALL WORK PERFORMED ON THE PROJECT AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK
- GENERAL CONTRACTOR SHALL PROVIDE, AT THE PROJECT SITE, A FULL SET OF GENERAL CONTRACTOR SHALL PROVIDE, AT THE PROJECT STIE, A FULL SET OF CONSTRUCTION DOCUMENTS UPDATED WITH THE LATEST REVISIONS AND ADDENDA OR CLARIFICATIONS FOR USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT. THIS SET IS A VALID CONTRACT DOCUMENT ONLY IF THE TITLE SHEET IS STAMPED "FOR CONSTRUCTION" AND EACH SUCCESSIVE SHEET BEARS THE ARCHITECT'S SIGNED WET STAMP.
- A COPY OF GOVERNING AGENCY APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY, AND BY LAW, SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. THE PLANS ARE NOT TO BE USED BY THE WORKMEN. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION AS GOVERNING AGENCY APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS, IN GOOD CONDITION, COMPLETE WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES UNDER THE DIRECT CARE OF THE SUPERINTENDENT. THE CONTRACTOR SHALL SUPPLY CLIENT CONSTRUCTION PROJECT MANAGER, WITH A COPY OF ALL REVISIONS, ADDENDA, AND/OR CHANGE ORDERS AT THE CONCLUSION OF THE WORK AS A PART OF THE AS-BUILT DRAWING
- 16. THE STRUCTURAL COMPONENTS OF ADJACENT CONSTRUCTION OR FACILITIES ARE NOT TO BE ALTERED BY THIS CONSTRUCTION PROJECT UNLESS NOTED OTHERWISE
- 17 THE CONTRACTOR SHALL STUDY THE STRUCTURAL ELECTRICAL MECHANICAL AND PLUMBING PLANS AND CROSS CHECK THEIR DETAILS, NOTES, DIMENSIONS, AND ALL REQUIREMENTS PRIOR TO THE START OF ANY WORK.
- 18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE
- 19. THE CONTRACTOR HAS THE RESPONSIBILITY OF LOCATING ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THE PLANS, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR, OR SUBCONTRACTOR AS SPECIFIED IN THE AGREEMENT BETWEEN SUBCONTRACTOR AND CONTRACTOR, SHALL BEAR THE EXPENSES OF REPAIR AND/OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGE BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THE WORK
- 20. THE REFERENCES ON THE DRAWINGS ARE FOR CONVENIENCE ONLY AND SHALL NOT LIMIT THE APPLICATION OF ANY DRAWING OR DETAIL
- 21. ALL DIMENSIONS ON THE PLANS ARE TO FACE OF STUD (F.O.S.) UNLESS NOTED

- 22. ALL EXISTING CONSTRUCTION, EQUIPMENT, AND FINISHES NOTED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE WITH THE FOLLOWING EXCEPTIONS:
 - A. PROPERTY NOTED TO BE RETURNED TO THE OWNER B. PROPERTY NOTED TO BE REMOVED BY THE OWNER.
- 23. THE GOVERNING AGENCIES, CODE AUTHORITIES, AND BUILDING INSPECTORS SHALL PROVIDE THE MINIMUM STANDARDS FOR CONSTRUCTION TECHNIQUES, MATERIALS, AND FINISHES USED THROUGHOUT THE PROJECT. TRADE STANDARDS AND/OR PUBLISHED MANUFACTURERS SPECIFICATIONS MEETING OR EXCEEDING DESIGN REQUIREMENTS SHALL BE USED FOR INSTALLATION.
- 24. WHEN REQUIRED STORAGE OF MATERIALS OCCURS. THEY SHALL BE EVENLY DISTRIBUTED OVER ROUGH FRAMED FLOORS OR ROOFS SO AS NOT TO EXCEED THE DESIGNED LIVE LOADS FOR THE STRUCTURE. TEMPORARY SHORING AND/OR BRACING IS TO BE PROVIDED WHERE THE STRUCTURE HAS NOT ATTAINED THE DESIGN. STRENGTH FOR THE CONDITIONS PRESENT.
- 25. PRIOR TO THE POURING OF ANY NEW SLAB OVER AN EXISTING SLAB THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OPENINGS, CHASES, AND EQUIPMENT WHICH ARE TO BE IMPLEMENTED INTO THE NEW WORK. ALL ITEMS DESIGNATED TO BE ABANDONED SHALL BE NOTED AND DISCUSSED WITH THE OWNER AND CLIENT CONSTRUCTION PROJECT MANAGER AS PART OF THE AS-BUILT DRAWING PACKAGE.
- 26. SEAL ALL PENETRATIONS THROUGH FIRE-RATED AREAS WITH U.L. LISTED OR FIRE
- 27. BUILDING INSPECTORS AND/OR OTHER BUILDING OFFICIALS ARE TO BE NOTIFIED PRIOR TO ANY GRADING, CONSTRUCTION, AND ANY OTHER PROJECT EFFORT AS MANDATED BY THE GOVERNING AGENCY.
- 28. CONTRACTOR TO PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF PROJECT AREA DURING CONSTRUCTION.
- 29. THE PROJECT, WHEN COMPLETED, SHALL COMPLY WITH LOCAL SECURITY CODES AND TITLE-24 ENERGY CONSERVATION REQUIREMENTS. (TITLE-24 WHEN APPLICABLE)
- 30. ALL GLASS AND GLAZING IS TO COMPLY WITH CHAPTER 54 OF THE U.S. CONSUMER SAFETY COMMISSION - SAFETY STANDARDS FOR ARCHITECTURAL GLAZING MATERIALS (42 FR 1428, CFR PART 1201) AND LOCAL SECURITY REQUIREMENTS.
- 31. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS FASEMENTS PAVING CURBING FTC DURING CONSTRUCTION LIPON COMPLETION OF WORK CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERT
- 32. CONTRACTOR SHALL KEEP GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH, CONTRACTOR SHALL REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OR PREMISES. SITE SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
- 33. NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL MATCH IN FORM, TEXTURE, FINISH, AND IN MATERIALS EXCEPT AS NOTED IN THE PLANS AND SPECIFICATIONS.
- 34. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BACKING, BLOCKING, AND/OR SLEEVES REQUIRED FOR THE INSTALLATION OF FIXTURES. MECHANICAL FOURMENT PLUMBING, HARDWARE, AND FINISH ITEMS TO INSURE A PROPER AND COMPLETE JOB
- 35. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A PROJECT LEVEL, STRAIGHT AND TRUE ACCORDING TO THE PLANS. THE CONTRACTOR SHALL COMPARE THE LINES. AND LEVELS OF THE EXISTING CONDITIONS WITH THOSE SHOWN ON THE PLANS PRIOR TO THE START OF ANY CONSTRUCTION. CLIENT SHALL BE NOTIFIED OF ANY ERRORS, OMISSIONS, OR INCONSISTENCIAN FOR TO ANY CONSTRUCTION.
- 36. THE CONTRACTOR IS TO PROVIDE PROTECTION FOR ADJOINING PROPERTIES FROM PHYSICAL HARM, NOISE, DUST, DIRT, AND FIRE AS REQUIRED BY THE GOVERNING AGENCIES.
- 37. WHERE SPECIFIED, MATERIALS TESTING SHALL BE TO THE LATEST STANDARDS AND/OR REVISIONS AVAILABLE AS REQUIRED BY THE GOVERNING AGENCY RESPONSIBLE FOR RECORDING THE RESULTS.
- 38. THE CONTRACTOR IS RESPONSIBLE FOR THE STORAGE OF ALL MATERIALS AND SHALL NOT DO SO ON PUBLIC PROPERTY WITHOUT A PERMIT TO DO SO FROM THE GOVERNING AGENCIES FOR THIS PURPOSE.
- 39. GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
- 40 TRADES INVOLVED IN THE PROJECT SHALL BE RESPONSIBLE FOR THEIR OWN CUTTING, FITTING, PATCHING, ETC., SO AS TO BE RECEIVED PROPERLY BY THE WORK OF OTHER TRADES.
- 41. ALL DEBRIS AND REFUSE IS TO BE REMOVED FROM THE PROJECT PREMISES AND SHALL BE LEFT IN A CLEAN (BROOM FINISH) CONDITION AT ALL TIMES BY EACH TRADE AS THEY PERFORM THEIR OWN PORTION OF THE WORK
- 42. CLIENT DOES NOT GUARANTEE ANY PRODUCTS, FIXTURES, AND/OR ANY EQUIPMENT NAMED BY A TRADE OR MANUFACTURER, GUARANTEE OR WARRANTY THAT MAY BE IN EFFECT IS DONE SO THROUGH THE COMPANY OR MANUFACTURER PROVIDING THE PRODUCT, FIXTURE, AND/OR EQUIPMENT ONLY: UNLESS SPECIFIC RESPONSIBILITY IS ALSO PROVIDED BY THE CONTRACTOR/SUBCONTRACTOR IN WRITTEN FORM,
- 43. CAUTIONI CALL BEFORE YOU DIG! BURIED UTILITIES EXIST IN THE AREA AND LITH ITY INFORMATION SHOWN MAY NOT BE COMPLETE. CONTACT THE ONE-CALL UTILITY LOCATE SERVICE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION
- 44. CONTRACTOR TO REPLACE AND/OR REROUTE ANY EXISTING UNDERGROUND UTILITIES ENCOUNTERED DURING TRENCHING AND GENERAL CONSTRUCTION.
- 45. CONTRACTOR TO LOCATE ALL UTILITIES PRIOR TO PLACEMENT OF TOWER FOOTING AND OTHER STRUCTURES TO BE PLACED IN GROUND SEE GENERAL NOTE #6 ON THIS SHEET.
- 46. SEE CIVIL DRAWINGS FOR ADDITIONAL SITE INFORMATION.
- 47. CONTRACTOR TO DOCUMENT ALL WORK PERFORMED WITH PHOTOGRAPHS AND SUBMIT TO CLIENT ALONG WITH REDLINED CONSTRUCTION SET.
- 48. CONTRACTOR TO DOCUMENT ALL CHANGES MADE IN THE FIELD BY MARKING UP (REDLINING) THE APPROVED CONSTRUCTION SET AND SUBMITTING THE REDLINED SET TO CLIENT UPON COMPLETION.

- 49. GENERAL CONTRACTOR IS TO COORDINATE ALL POWER INSTALLATION WITH POWER COMPANY AS REQUIRED, CONTRACTOR TO REPORT POWER INSTALLATION COORDINATION SOLUTION(S) TO CLIENT REPRESENTATIVE PROJECT CONSTRUCTION MANAGER AND ARCHITECT
- ANY SUBSTITUTIONS OF MATERIALS AND/OR EQUIPMENT, MUST BE APPROVED BY
- 51. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REMEDY ALL THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REMEDY ALL FAULTY, INFERIOR, AND/OR IMPROPER MATERIALS, DAMAGED GOODS, AND/OR FAULTY WORKMANSHIP FOR ONE (1) YEAR AFTER THE PROJECT IS COMPETE AND ACCEPTED UNDER THIS CONTRACT; UNLESS NOTED OTHERWISE IN THE CONTRACT BETWEEN THE OWNER AND THE CONTRACTOR. (EXCEPTION) THE ROOFING SUBCONTRACTOR, SHALL FURNISH A MAINTENANCE AGREEMENT FOR ALL WORK DONE, COSIGNED BY THE GENERAL CONTRACTOR, TO MAINTAIN THE ROOFING IN A WATERTIGHT CONDITION FOR A PERIOD OF TWO (2) YEARS STARTING AFTER THE DATE OF SUBSTANTIAL COMPLETION OF THE PROJECT, UNLESS OTHERWISE WRITTEN IN THE CONTRACT BETWEEN THE OWNER AND THE CONTRACTOR.
- 52. THE CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION FOR THE SAFETY OF THE OWNER'S EMPLOYEES, WORKMEN, AND ALL TIMES DURING THE CONSTRUCTION OF THE PROJECT
- 53. THE CONTRACTOR SHALL BE REQUIRED TO PAY FOR ALL NECESSARY PERMITS AND/OR FEES WITH RESPECT TO THE WORK TO COMPLETE THE PROJECT. BUILDING PERMIT APPLICATIONS SHALL BE FILED BY THE OWNER OR HIS REPRESENTATIVE. CONTRACTOR SHALL OBTAIN PERMIT AND MAKE FINAL PAYMENT FOR SAID DOCUMENT.
- 54. THE ARCHITECT/ENGINEER IN CHARGE SHALL SIGN AND SEAL ALL DRAWINGS AND/OR
- 55. CLIENT WILL REVIEW AND APPROVE SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH DESIGN CONCEPT. CLIENT PROJECT APPROVAL OF A SEPARATE ITEM SHALL NOT INCLUDE APPROVAL OF AN ASSEMBLY IN WHICH THE ITEM
- 56. ALL ANTENNAS MOUNTED ON ROOF SUPPORT FRAMES TO BE PROVIDED BY CLIENT
- 57. CONTRACTOR TO PROVIDE TRENCH AS REQUIRED TO INSTALL BOTH ELECTRICAL AND TELEPHONE UNDERGROUND CONDUITS (#40 PVC) PER S.C.E. WORKORDER, BACKFILL WITH CLEAN SAND AND COMPACT TO THE SATISFACTION OF THE DISTRICTS INSPECTOR. REPLACE FINISH GRADE WITH MATCHING MATERIALS (GRASS, ASPHALT,
- 58. CONTRACTOR TO PROVIDE HEAVY STEEL PLATES AT OPEN TRENCHES FOR SAFETY AND TO PROTECT EXISTING GROUND SURFACES FROM HEAVY EQUIPMENT UTILIZED DURING CONSTRUCTION.
- 59. CONTRACTOR TO PATCH AND REPAIR ALL GROUND SURFACES WITHIN THE CONSTRUCTION AREA AS NECESSARY TO PROVIDE A UNIFORM SURFACE AND MAINTAIN EXISTING SURFACE DRAINAGE SLOPES.
- 60. CONTRACTOR TO REPLACE LANDSCAPE VEGETATION THAT WAS DAMAGED DUE TO CONSTRUCTION, AND TO MODIFY REMAINING IRRIGATION LINES TO OPERATING CONDITION, PROVIDING FULL COVERAGE TO IMPACTED AREAS.
- 61. IN THE CASE OF ROOFTOP SOLUTIONS FOR EQUIPMENT AND/OR ANTENNA FRAMES WHERE PENETRATION OF EXISTING ROOFING MATERIALS OCCUR. THE GENERAL CONTRACTOR SHALL COORDINATE WITH BUILDING OWNER AND BUILDING ROOFING CONTRACTOR OF RECORD FOR INSTALLATION, PATCH, REPAIR OR ANY AUGMENTATION TO THE ROOF, AND HAVE THE WORK GUARANTEED UNDER THE ROOFING CONTRACTOR'S WARRANTY FOR MOISTURE PENETRATION OR AND OTHER FUTURE BREACH OF ROOFING INTEGRITY.
- 62. IN THE CASE OF ROOFTOP SOLUTIONS WITH THE INSTALLATION OF ANTENNAS WITHIN CONCEALED (SHROUDED) SUPPORT FRAMES OR TRIPODS, THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE FRP DESIGNER/FABRICATOR TO ENSURE THAT THE FINAL FRP SHROUD IS SIMULATING (IN APPEARANCE) DESIGNATED EXISTING EXTERIOR BUILDING FACADE MATERIALS, TEXTURES, AND COLORS, THE CONTRACTOR SHALL FURTHERMORE ENSURE THE USE OF COUNTERSLINK EASTENERS IN ALL ERP CONSTRUCTION WHEN ENSURE THE USE OF COUNTERSUME FASTENERS IN ALL FAP CONSTRUCTION. WHEN PHOTOSIMULATIONS ARE PROVIDED, THE CONTRACTOR SHALL ENSURE THAT FINAL CONSTRUCTION REPRESENTS WHAT IS INDICATED IN PHOTOSIMULATION. SHOP DRAWINGS SHALL BE PROVIDED TO THE GENERAL CONTRACTOR, CONSTRUCTION COORDINATOR, AND ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION.
- 63. IN THE CASE OF ROOFTOP SOLUTIONS FOR EQUIPMENT AND/OR ANTENNA FRAMES WHERE ANCHORING TO A CONCRETE ROOF SLAB IS REQUIRED, CONTRACTORS SHALL CONFIRM (PRIOR TO SUBMITTING BID) WITH CONSULTING CONSTRUCTION COORDINATOR AND ARCHITECT THE PRESENCE OF POST TENSION TENDONS WITHIN THE ROOF SLAB -RESULTING FROM AN UNDOCUMENTED DESIGN CHANGE IN THE EXISTING BUILDING "AS-BUILT DRAWING SET" - HAVING INDICATED AN ORIGINAL DESIGN SOLUTION OF AS-BUILT DRAWING SET - PAVING INDICATED AN ORIGINAL DESIGN SOLUTION OF REINFORCED CONCRETE WEMBEDDED STEEL REBAR. IN THE EVENT POST TENSION SLAB SOLUTION IS PRESENT, CONTRACTOR SHALL INCLUDE PROVISIONS FOR X-RAY PROCEDURES (INCLUDED IN BID) FOR ALL PENETRATION AREAS WHERE ANCHORING
- 64 GENERAL & SUB CONTRACTORS SHALL USE STAINLESS STEEL METAL LOCKING TIES FOR GENERAL & SUB-CONTRACTIONS STALL USES I FAINLESS STEEL MEILA LUCKING TIES FOR ALL CABLE TRAY TIE DOWNS AND ALL OTHER GENERAL TIE DOWNS (WHERE APPLICABLE). PLASTIC ZIP TIES SHALL NOT BE PERMITTED FOR USE ON CLIENT PROJECTS. RECOMMENDED MANUFACTURE SHALL BE: PANDUIT CORP. METAL LOCKING TIES MODEL NO. MLT4S-CP UNDER SERIES-304 (OR EQUAL). PANDUIT PRODUCT DISTRIBUTED BY
- 65. ALL WORK TO BE DONE BETWEEN HOURS OF 8:00 AM AND 5:00 PM, EXCLUDING HOLIDAYS

SPECIAL NOTES:

- PLANS PART OF THIS SET ARE COMPLEMENTARY. INFORMATION IS NOT LIMITED TO ONE PLAN. DRAWINGS AND SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND SHALL REMAIN THE PROPERTY OF THE ARCHITECT, WHETHER THE PROJECT FOR WHICH THEY ARE MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECT FOR WINDIN THE TARE WADE IS EASOLIED OR NOT. THEIT ARE NOT TO BE SUBJECT THE OWNER ON OTHER PROJECTS OR EXTENSION TO THIS PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH A PPROPRIATE COMPENSATION TO THE ARCHITECT. THESE PLANS WERE PREPARED TO BE SUBMITTED TO GOVERNMENTAL BUILDING AUTHORITIES FOR REVIEW FOR COMPLIANCE WITH APPLICABLE CODES AND IT IS THE SOLE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR TO BUILD ACCORDING TO APPLICABLE BUILDING CODES.
- IF CONTRACTOR OR SUB-CONTRACTOR FIND IT NECESSARY TO DEVIATE FROM ORIGINAL APPROVED PLANS, THEN IT IS THE CONTRACTOR'S AND THE SUB-CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE ARCHITECT WITH 4 COPIES OF THE PROPOSED CHANGES FOR HIS APPROVAL BEFORE PROCEEDING WITH THE WORK, IN ADDITION THE CONTRACTOR AND SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR PROCURING ALL NECESSARY APPROVALS FROM THE BUILDING AUTHORITIES FOR THE PROPOSED CHANGES BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR AND SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR PROCURING ALL NECESSARY INSPECTIONS AND APPROVALS FROM BUILDING AUTHORITIES DURING THE EXECUTION OF THE WORK.
- IN EVERY EVENT, THESE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS SHALL BE INTERPRETED TO BE A MINIMUM ACCEPTABLE MEANS OF CONSTRUCTION BUT THIS SHALL NOT RELIEVE THE CONTRACTOR, SUB-CONTRACTOR, AND/OR SUPPLIER/MANUFACTURER FROM PROVIDING A COMPLETE AND CORRECT JOB WHEN ADDITIONAL ITEMS ARE REQUIRED TO THE MINIMUM SPECIFICATION. IF ANY TIEMS NEED TO EXCEED THESE MINIMUM SPECIFICATIONS TO PROVIDE A COMPLETE, ADEQUATE AND SAFE WORKING CONDITION, THEN IT SHALL BE THE DEEMED AND UNDERSTOOD TO BE INCLUDED IN THE DRAWINGS. FOR EXAMPLE, IF AN ITEM AND/OR PIECE OF EQUIPMENT REQUIRES A LARGER WIRE SIZE (I.E. ELECTRICAL WIRE, STROOGER OR LARGER PIPME), INCREASED QUANTITY (I.E. STRUCTURE LELMENTS), REDUCED SPACING, AND/OR INCREASED LENGTH (I.E. BOLT LENGTHS, BAR LENGTHS) THEN IT SHALL BE DEEMED AND UNDERSTOOD TO BE INCLUDED IN THE BID/PROPOSAL. THESE DOCUMENTS ARE MEANT AS A GUIDE AND ALL ITEMS REASONABLY INFERRED SHALL BE DEEMED TO BE INCLUDED.
- THESE CONTRACT DOCUMENTS AND SPECIFICATIONS SHALL NOT BE CONSTRUED TO CREATE A CONTRACTUAL RELATIONSHIP OF ANY KIND BETWEEN THE ARCHITECT AND THE CONTRACTOR







SB13 **CARILLON**

2000 CARILLON POINT KIRKLAND, WA 98033

> **EXISTING** ROOFTOP

PROIECT NO

CHECKED BY:

90140 001 LRT

ļ		ISSUED FOR:				
	REV	DATE	DRWN	DESCRIPTION		
ļ	Α	4/24/14	DGJ	PRELIMINARY REVIEW		
ľ	В	8/26/14	DGJ	PRELIMINARY REVIEW		
ľ	0	8/27/14	DGJ	CONSTRUCTION		
ļ	1	11/14/14	DGJ	CONSTRUCTION		
ĺ	2	1/6/15	DGJ	NEW RFDS		
li						

B&T ENGINEERING, INC.



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTIO OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER:

DESIGN CRITERIA:

- THE STRUCTURAL DESIGN OF THIS PROJECT IS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE 2012 WITH WASHINGTON STATE BUILDING CODE AMENDMENTS (2012 IBC)
- DESIGN LOADS: DESIGN DATA FOR KING COUNTY, WA:

-SEISMIC ZONE

ROOF SNOW LOAD	N/A (NOT A ROOFTOP SOLUT
BASIC WIND SPEED	85 MPH (3 SEC GUST)
-WIND EXPOSURE	В

STRUCTURAL STEEL NOTES:

- SHOP DRAWINGS FOR STRUCTURAL STEEL SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW PRIOR TO FABRICATION.
- STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION (INCLUDING FIELD WELDING, HIGH STRENGTH FIELD BOLTING, EXPANSION BOLTS, AND THREADED EXPANSION ANCHORS) SHALL BE BASED ON THE A.J.S. "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" LATEST EDITION, SUPERVISION SHALL BE IN ACCORDANCE WITH 2012 IBC CHAPTER 22, BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE CONSULTANT. THE CONSULTANT SHALL BE FURNISHED WITH A COPY OF ALL INSPECTION REPORTS AND TEST RESULTS
- 3. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER

A WIDE FLANGE SHAPE ASTMA-992, Fv 50 KSI A. WIDE FLANGE SHAPE

B. OTHER SHAPE, PLATES AND ROD

C. PIPE COLUMNS

D. STRUCTURAL TUBING ASTM A36, Fy 36 KSI ASTM A53, Fy 35 KSI ASTM A500, Fy 46 KSI ASTM A307 . ANCHOR BOLTS F. CONNECTION BOLTS

- 4. ALL MATERIAL TO BE HOT DIPPED GALVANIZED AFTER FABRICATION PER A123/A123M-00.
- ALL WELDING SHALL BE IN CONFORMANCE WITH A.I.S.I. AND AWS STANDARDS AND SHALL BE PERFORMED BY W.A.B.O. CERTIFIED WELDERS USING E70 XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED. WELDING OF GRADE 60 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING LOW HYDROGEN ELECTRODES. WELDING OF GRADE 40 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING E70 XX ELECTRODES. WELDING WITHIN 4" OF COLD BENDS IN REINFORCING STEEL IS NOT PERMITTED. SEE REINFORCING NOTE FOR MATERIAL REQUIREMENTS OF WELDED BARS.
- 6. COLD-FORMED STEEL FRAMING MEMBERS SHALL BE OF THE SHAPE, SIZE, AND GAGE SHOWN ON THE PLANS. PROVIDE MINIMUM SECTION PROPERTIES INDICATED. ALL COLD-FORMED STEEL FRAMING SHALL CONFORM TO THE A.I.S.I. "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
- BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (3/4" DIA.) AND SHALL HAVE A MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
- 8. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A307
- ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE DESIGN & CONSTRUCTION SPECIFICATION AND IN ACCORDANCE WITH ASTM A36 UNLESS NOTED OTHERWISE.
- 10 ALL WELDS TO BE 1/4" FILLET UNLESS NOTED OTHERWISE
- 11. TOUCH UP ALL FIELD DRILLING AND WELDING WITH 2 COATS OF GALVACON (ZINC RICH PAINT) OR APPROVED EQUAL.

BUILDING NOTES:

PROVIDE SUPPORTS FOR THE ANTENNA COAX CABLES TO THE ELEVATION OF ALL INITIAL AND FUTURE ANTENNAS. ANTENNA COAX CABLES ARE TO BE SUPPORTED AND RESTRAINED AT THE CENTERS SUITABLE TO THE MANUFACTURER'S REQUIREMENTS.

ABBREVIATED ROOF TOP SAFETY PROCEDURES (WHEN APPLICABLE):

(AS PER "ACCIDENT PREVENTION PROGRAM" - BY PERMISSION OF WREN CONSTRUCTION, INC. - 03/01/99)

FALL PROTECTION METHODS AND EQUIPMENT ROOF TOP INSTALLATIONS

- FOR WORK IS BEING PERFORMED WITHIN 25' OF AN UNPROTECTED ROOF EDGE. THE CONSTRUCTION SUPERVISOR SHALL DESIGNATE A TRAINED SAFETY MONITOR TO OBSERVE THE MOVEMENTS AND ACTIVITIES OF THE
- SAFETY MONITOR SHALL WARN CONSTRUCTION WORKERS OF HAZARDS (I.E., BACKING UP TOWARD A ROOF EDGE, ETC.) OR UNSAFE ACTIVITIES. THE SAFETY MONITOR MUST BE ON THE SAME ROOF AND WITHIN VISUAL AND VERBAL DISTANCE OF THE CONSTRUCTION WORKERS
- CONSTRUCTION INVOLVING WORKERS TO APPROACH WITHIN 6' OR LESS OF AN UNPROTECTED ROOF EDGE, REQUIRES WORKERS TO USE SAFETY
- SAFETY LINE SHALL BE MINIMUM 1/2" DIAMETER NYLON, WITH A NOMINAL TENSILE STRENGTH OF 5400 LBS.
- SAFETY LINE SHALL BE ATTACHED TO A SUBSTANTIAL MEMBER OF THE STRUCTURE.
- SAFETY LINE LENGTH SHALL BE SET ALLOWING CONSTRUCTION WORKER TO REACH EDGE OF ROOF, BUT NOT BEYOND.
- SAFETY BELTS SHALL BE WORN BY ALL CONSTRUCTION WORKERS.
- MONTHLY SAFETY INSPECTION AND MAINTENANCE OF THE FALL PROTECTION EQUIPMENT SHALL OCCUR BY THE SAFETY COMMITTEE REPRESENTATIVES, INCLUDING:

INSPECTION OF CONSTRUCTION AREA FOR HAZARDS INSPECTION OF CONSTRUCTION AREA FOR HAZARDS
USE OF AN INSPECTION CHECKLIST
INTERVIEWING COWORKERS REGARDING SAFETY CONCERNS
REPORTING AND DOCUMENTING ANY HAZARDS
REPORTING HAZARDS TO THE SAFETY COMMITTEE FOR CONSIDERATION POSTING RESULTS OF INSPECTION AND ANY ACTION TAKEN RECEIVING AN UNBIASED REVIEW OF ONE'S OWN WORK AREA BY ANOTHER COWORKER SAFETY REPRESENTATIVE

REFER TO ROOFTOP WORK AREA SAFETY PROTOCOL NATIONAL ASSOCIATION OF TOWER ERECTORS 2000 PUBLICATION

REFERENCED OSHA REGULATION/STANDARDS SHALL BE REVIEWED BY TOWERERECTORS

EQUIPMENT INSTALLERS, AND TOWERROOF TOP CONTRACTORS/SUBCONTRACTORS
29 CFR 1926.500 - SCOPE, APPLICATION, AND DEFINITIONS
29 CFR 1926.501 - DUTY TO HAVE FALL PROTECTION
19 CFR 1926.502 - FALL PROTECTION SYSTEMS CRITERIA AND PRACTICES

SYMBOLS AND ABBREVIATIONS

A/C	AIR CONDITIONING	LBS	POUNDS
AGL	ABOVE FINISH GRADE	MAX	MAXIMUM
APPROX	APPROXIMATELY	MECH	MECHANICAL
ALLINOX	ALLINOXIMATEET	MTL	METAL
BLDG	DUIL DING	MFR	MANUFACTURE
	BUILDING		
BLK	BLOCKING	MGR	MANAGER
		MIN	MINIMUM
CLG	CEILING	MISC	MISCELLANEOUS
CLR	CLEAR		
CONC	CONCRETE	NA	NOT APPLICABLE
CONST	CONSTRUCTION	NIC	NOT IN CONTRACT
CONT	CONTINUOUS	NTS	NOT TO SCALE
DBL	DOUBLE	oc	ON CENTER
DIA	DIAMETER	OD	OUTSIDE DIAMETER
DIAG	DIAGONAL		
DN	DOWN	PPC	POWER PROTECTION CABINET
DET	DETAIL	PROJ	PROJECT
DWG	DRAWING	PROP	PROPERTY
DWG	DRAWING	PT	
	EAGU		PRESSURE TREATED
EA	EACH	REQ	REQUIRED
ELEV	ELEVATION	RM	ROOM
ELEC	ELECTRICAL	RO	ROUGH OPENING
EQ	EQUAL		
EQUIP	EQUIPMENT	SHT	SHEET
EXT	EXTERIOR	SIM	SIMILAR
		SPEC	SPECIFICATION
FIN	FINISH	SF	SQUARE FOOT
FLUOR	FLUORESCENT	SS	STAINLESS STEEL
FLR	FLOOR	STL	STEEL
FT	FOOT	STRUCT	STRUCTURAL
		STD	STUD
GA	GAUGE	SUSP	SUSPENDED
GALV	GALVANIZED	3031	303i ENDED
GC	GENERAL CONTRACTOR	TNNG	TINNED
		TYP	TYPICAL
GRND	GROUND	TYP	TYPICAL
GYP BD	GYPSUM WALL BOARD		I II I FOO NOTED
		UNO	UNLESS NOTED
HORZ	HORIZONTAL		OTHERWISE
HR	HOUR		
HT	HEIGHT	VERT	VERTICAL
HVAC	HEATING	VIF	VERIFY IN FIELD
	VENTILATION		
	AIR CONDITIONING	W/	WITH
		W/O	WITHOUT
ID	INSIDE DIAMETER	WP	WATER PROOF
IN	INCH		
INFO	INFORMATION		
INSUL	INSULATION		
INT	INTERIOR		
IBC	INTERIOR INTERNATIONAL BUILDING CODE		
1BC	INTERNATIONAL BUILDING CODE		
	— LIGT—— LIGT—	UNDERG	ROUND TELCO

— UGT—— UGT—— — UGP—— UGP—— — — — —	UNDERGROUND TE UNDERGROUND PO GROUND WIRE COAXIAL CABLE
2	ANTENNA
ę.	CENTERLINE
(E)	EXISTING
(P)	PROPOSED
XXX	DETAIL NUMBER SHEET NUMBER

SPECIAL INSPECTIONS:

SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC 2006 SECTION 1704.

SOILS/GEOTECHNICAL:

□SHORING INSTALLATION AND MONITORING
□OBSERVE AND MONITOR EXCAVATION UVERIFY SOIL BEARING psf BEARING SUBSURFACE DRAINAGE PLACEMENT VERIFY FILL MATERIAL AND COMP ACTION □ VERIFY CONDITIONS AS ANTICIPATED □PILE PLACEMENT (AUGER CAST/DRIVEN PILE) □OTHER

REINFORCED CONCRETE:

□REINFORCING STEEL AND CONCRETE PLACEMENT □PRESTRESSED/PRECAST CONCRETE FABRICATION AND ERECTION DRATCH PLANT INSPECTION SHOTCRETE

□GROUTING □OTHER

STRUCTURAL STEEL:

□FABRICATION AND SHOP WELDS

□ERECTION AND FIELD WELDS AND BOLTING

STRUCTURAL ALUMINUM:

□FABRICATION AND SHOP WELDS DERECTION AND FIELD WELDS AND BOLTING

STRUCTURAL MASONRY: CONTINUOUS

PERIODIC

OTHER:

ANCHORING TO CONCRETE: ☐BOLTS INSTALLED IN CONCRETE
☐POST-INSTALLATION ADHESIVE ANCHORS □POST-INSTALLATION MECHANICAL ANCHORS







SB13 **CARILLON**

2000 CARILLON POINT KIRKLAND, WA 98033

> **EXISTING** ROOFTOP

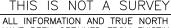
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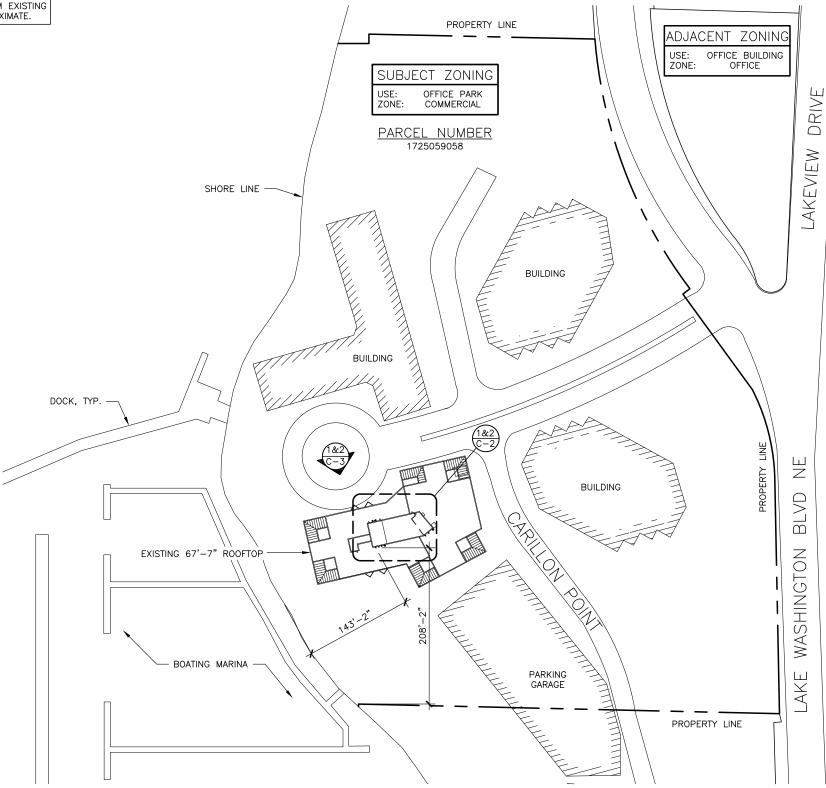
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	1	11/14/14	DGJ	CONSTRUCTION	
I	2	1/6/15	DGJ	NEW RFDS	

B&T ENGINEERING. INC.



SHEET NUMBER:





ADJACENT ZONING APARTMENT ZONE: RESIDENTIAL

ADJACENT ZONING APARTMENT USE: ZONE: RESIDENTIAL

ADJACENT ZONING CONDOMINIUM RESIDENTIAL

POR GL 1 & 2 & BLKS F & G OF THE 2ND SUPL PLAT OF LK WN SH LDS TGW 2ND CL SHLDS ADJ ALL LY WLY OF W
MGN LK WN BLVD-LESS POR N OF S LN OF N 1076.80 FT SD GL 1 & ITS WLY
PROD - LESS POR THOF S OF LN BEG AT
NXN 1902.66 FT S & PLW N LN GL 1 &
W MGN LK WN BLVD TH S 03-09-13 E
ALG W MGN 75 FT TO TPOB OF DESC LN TH N 88-35-53 W TO INNER HARBOR LN & TERMINUS THIS LN - LESS POR CONV BY REC 8907281497 AKA LOT B KK ALT LL #LL-91-50 REC 9104302101

OVERALL SITE PLAN SCALE: 11x17: 1/128" = 1'-0" 24x36: 1/64" = 1'-0"









SB13 **CARILLON**

2000 CARILLON POINT KIRKLAND, WA 98033

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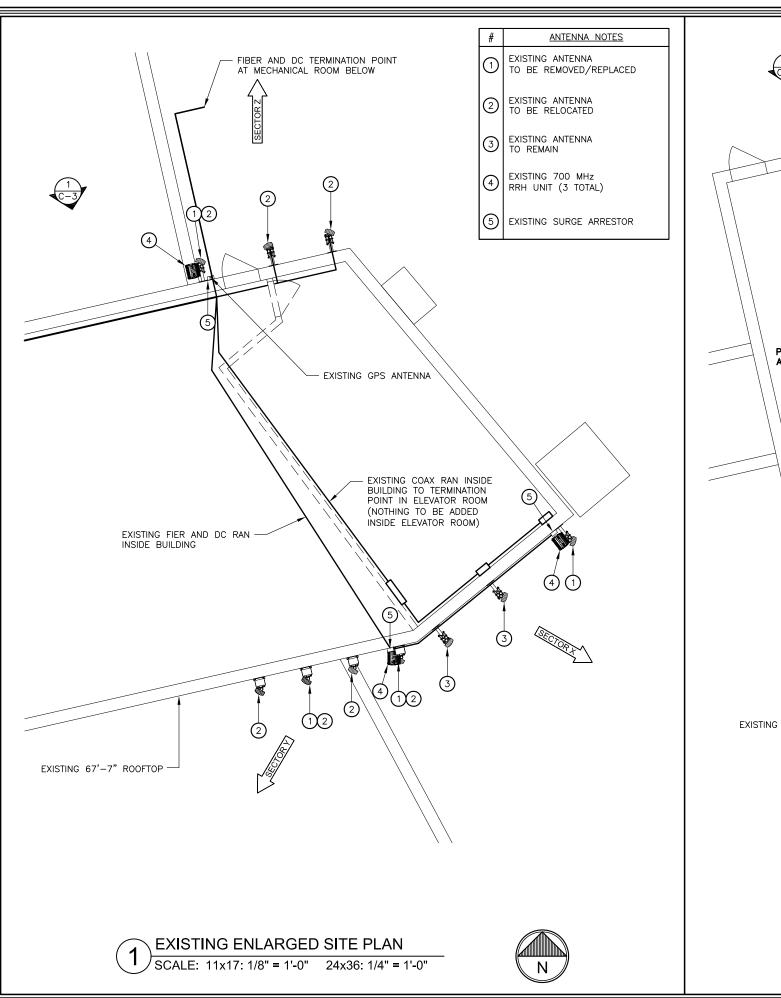
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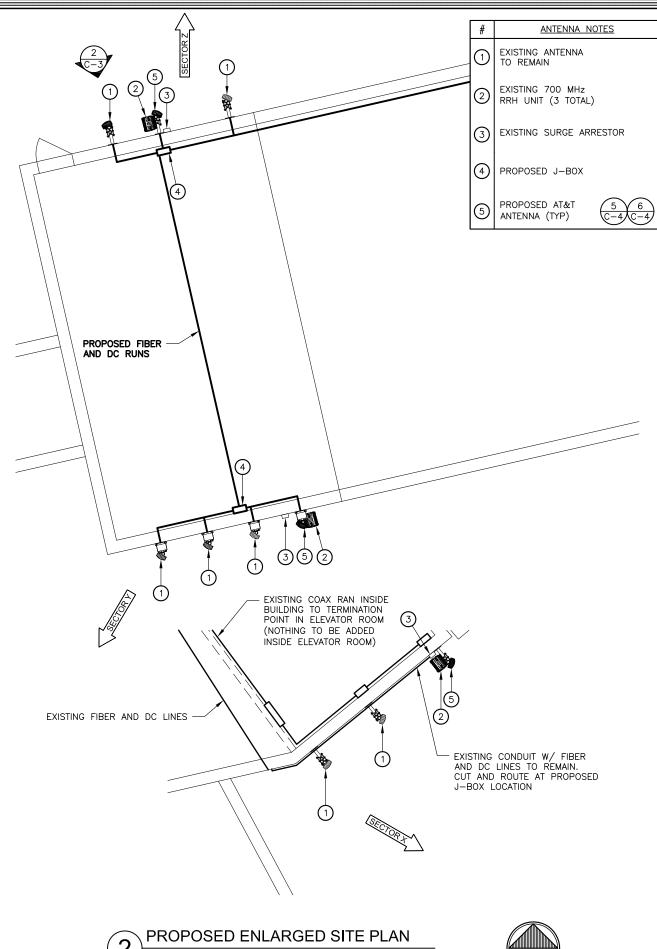
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SHEET NUMBER: REVISION











SB13 **CARILLON**

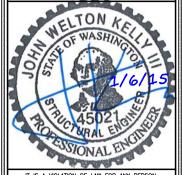
2000 CARILLON POINT KIRKLAND, WA 98033

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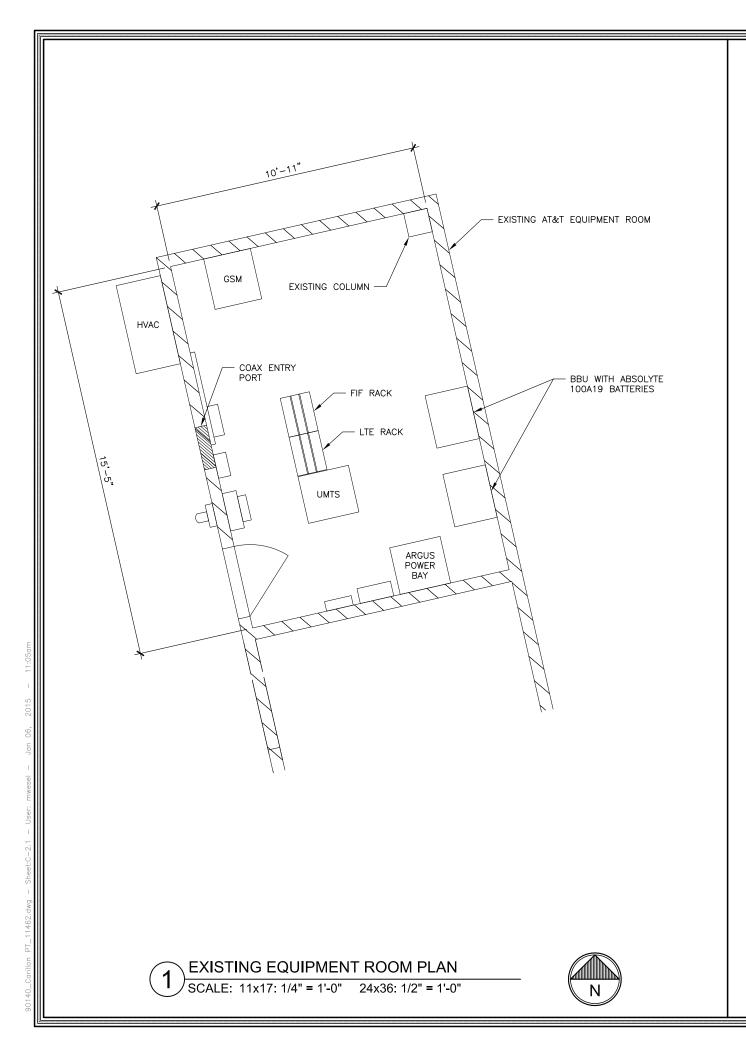
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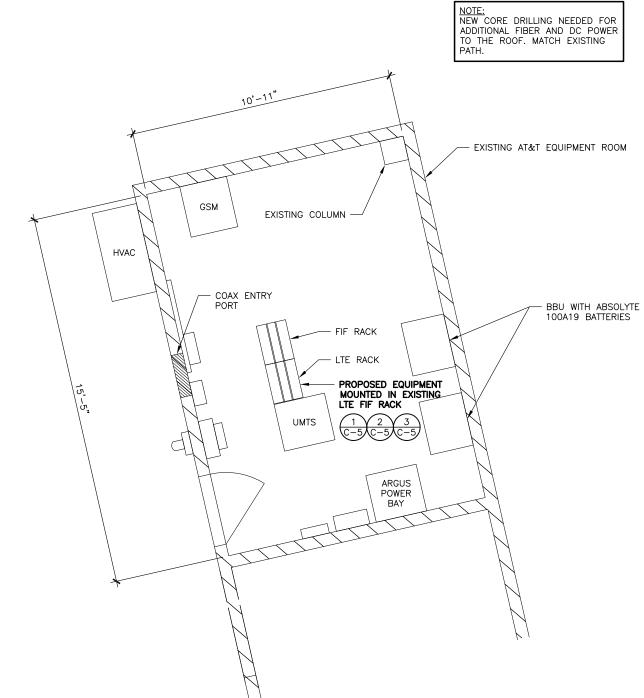
B&T ENGINEERING, INC.



SHEET NUMBER: REVISION:

SCALE: 11x17: 1/8" = 1'-0" 24x36: 1/4" = 1'-0"









SB13 **CARILLON** PT

2000 CARILLON POINT KIRKLAND, WA 98033

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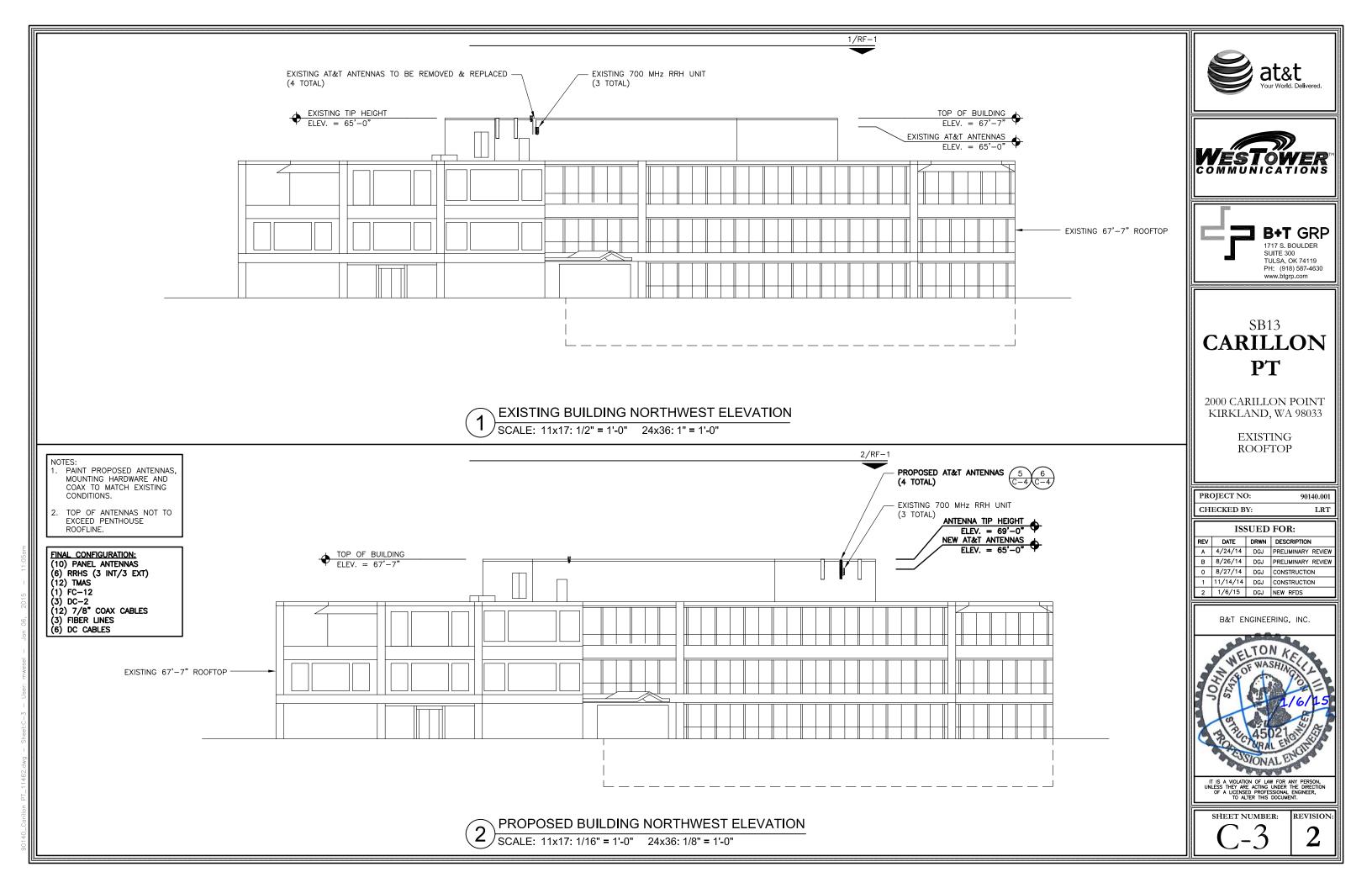
B&T ENGINEERING, INC.



REVISION:

2) SCALE: 11x17: 1/4" = 1'-0" 24x36: 1/2" = 1'-0"

PROPOSED EQUIPMENT ROOM PLAN



RRH MOUNTING PIPE CLAMP 3 SCALE: N.T.S.

NOT USED SCALE: N.T.S.







SB13 **CARILLON** PT

2000 CARILLON POINT KIRKLAND, WA 98033

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B&T ENGINEERING, INC.

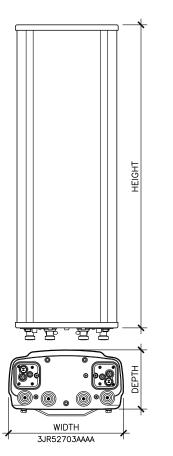


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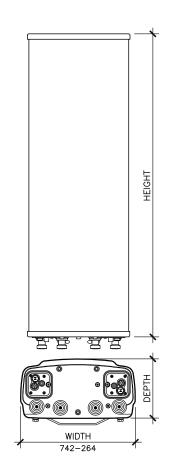
REVISION:

NOT USED $(1)_{\text{SCALE: N.T.S.}}$

NOT USED 2 NOT USED SCALE: N.T.S.



ANTENNA DIMENSIONS (INCHES)									
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT					
742-264	51.8"	10.3"	5.5"	36.4	lbs				
3JR52703AAAA	96"	13.4"	16.5"	163.8	lbs				



- NOTES:

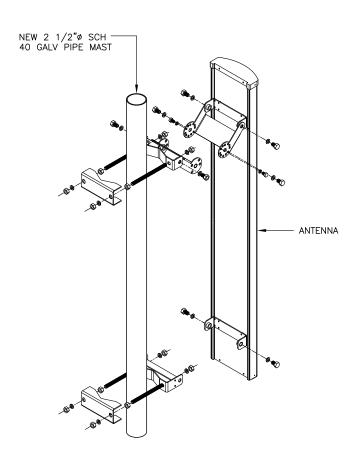
 1. VERIFY ANTENNA DIMENSIONS WITH MANUFACTURER.

 2. ANTENNA MOUNTING KIT FOR 2 TO 4.5 O.D. MAST (MODEL #DM380) (QTY. 2)

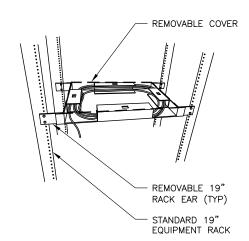
 3. LOCKING TILT MOUNT KIT 0—13 DEGREES DOWNTILT ANGLE (MODEL #DB5083)

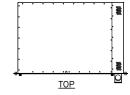
 4. VERIFY FINAL ANTENNA MODEL WITH CURRENT VERSION OF THE AT&T RFDS.

PANEL ANTENNA DETAIL SCALE: N.T.S.



ANTENNA MOUNTING DETAIL SCALE: N.T.S.

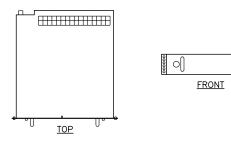






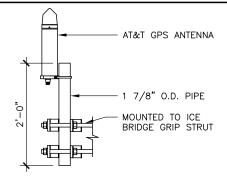
BBU MANUFACTURER ALCATEL LUCENT MODEL HEIGHT DEPTH WIDTH WEIGHT

BBU DETAIL SCALE: N.T.S.



ALCATEL LUCENT MODEL HEIGHT DEPTH DC6-48-60-RM 3.469"; 2U (RACK UNITS) 20.1" WIDTH

RAYCAP SURGE SUPPRESSOR SCALE: N.T.S.



- 1. LOCATION OF ANTENNA MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CONNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.

 2. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.

 3. ADD LUCENT, 408762045, KS24535L10, 1:2 GPS SPLITTER, ASSEMBLY

 4. THE GPS IS TO HAVE A MINIMUM 10'-0" SEPARATION FROM ANY TRANSMITTING ANTENNA.
- TRANSMITTING ANTENNA.









SB13 **CARILLON**

2000 CARILLON POINT KIRKLAND, WA 98033

> **EXISTING** ROOFTOP

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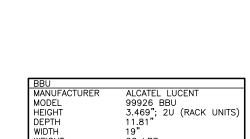
B&T ENGINEERING, INC.



SHEET NUMBER:

REVISION:

EXCESS CABLE TRAY SCALE: N.T.S.





A. GENERAL

- EXAMINE THE SITE CONDITIONS VERY CAREFULLY AND THE SCOPE OF PROPOSED WORK TOGETHER WITH THE WORK OF ALL OTHER TRADES AND INCLUDE IN THE BID PRICE ALL COSTS FOR WORK SUCH AS EQUIPMENT AND WIRING MADE NECESSARY TO ACCOMMODATE THE ELECTRICAL SYSTEMS SHOWN AND SYSTEMS OF OTHER TRADES.
- 2. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
- 3. PERFORM DETAILED VERIFICATION OF WORK PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND COMMENCING CONSTRUCTION. ISSUE A WRITTEN NOTICE TO THE CONSULTANT OF ANY DISCREPANCIES.
- 4. OBTAIN ALL PERMITS, PAY ASSOCIATED FEES AND SCHEDULE INSPECTION.
- 5. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, INSURANCE, AND SERVICES TO COMPLETE THIS PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND PRESENT IT AS FULLY OPERATIONAL TO THE SATISFACTION OF THE OWNER
- 6. CARRY OUT WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND O.S.H.A.
- 7. PRIOR TO BEGINNING WORK COORDINATE ALL POWER AND TELCO WORK WITH THE LOCAL UTILITY COMPANY AS IT MAY APPLY TO THIS SITE. ALL WORK TO COMPLY WITH THE RULES AND REGULATIONS OF THE UTILITIES INVOLVED.
- B. FABRICATION AND INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEM SHALL BE DONE IN A FIRST CLASS WORKMANSHIP PER NECA STANDARD 1-2000 BY QUALIFIED PERSONNEL EXPERIENCED IN SUCH WORK AND SHALL SCHEDULE THE WORK IN AN ORDERLY MANNER SO AS NOT TO IMPEDE PROGRESS OF THE PROJECT.
- DURING PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF THE ELECTRICAL SYSTEMS, LOCATING EACH CIRCUIT PRECISELY AND DIMENSIONING EQUIPMENT, CONDUIT AND CABLE LOCATIONS. UPON COMPLETION OF THE INSTALLATION, TRANSFER ALL RECORD DATA TO BLACK LINE PRINTS OF THE ORIGINAL DRAWINGS AND SUBMIT THESE DRAWINGS AS RECORD DRAWINGS TO THE CONSULTANT.
- IO. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL, OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
- 11. GENERAL CONTRACTOR IS RESPONSIBLE FOR REQUESTING CONNECTION OF COMMERCIAL POWER FROM THE POWER COMPANY. ELECTRICAL CONTRACTOR SHALL COORDINATE THIS WORK WITH THE GENERAL CONTRACTOR
- 12. COORDINATE EXACT TELEPHONE REQUIREMENTS AND SERVICE ROUTING WITH LOCAL TELEPHONE COMPANY. APPLY FOR TELEPHONE SERVICE IMMEDIATELY UPON AWARD OF CONTRACT.

B. BASIC MATERIALS AND METHODS

- ALL ELECTRICAL WORK SHALL CONFORM TO THE EDITION OF THE NEC ACCEPTED BY THE LOCAL JURISDICTION AND TO THE APPLICABLE LOCAL CODES AND REGULATIONS.
- 2. ALL MATERIALS AND EQUIPMENT SHALL BE NEW. MATERIALS AND EQUIPMENT SHALL BE THE STANDARD PRODUCTS OF MANUFACTURER'S CURRENT DESIGN. ANY FIRST—CLASS PRODUCT MADE BY A REPUTABLE MANUFACTURER MAY BE USED PROVIDING IT CONFORMS TO THE CONTRACT REQUIREMENTS AND MEETS THE APPROVAL OF THE CONSULTANT AND THE OWNER.
- 3. ARRANGE CONDUIT, WIRING, EQUIPMENT, AND OTHER WORK GENERALLY AS SHOWN, PROVIDING PROPER CLEARANCES AND ACCESS. CAREFULLY EXAMINE ALL CONTRACT DRAWINGS AND FIT THE WORK IN EACH LOCATION WITHOUT SUBSTANTIAL ALTERATION. WHERE DEPARTURES ARE PROPOSED BECAUSE OF FIELD CONDITIONS OR OTHER CAUSES, PREPARE AND SUBMIT DETAILED DRAWINGS FOR ACCEPTANCE.
- 4. THE CONTRACT DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ALL OFFSETS, BENDS, FITTINGS AND ACCESSORIES ARE NOT NECESSARILY SHOWN. PROVIDE ALL SUCH ITEMS AS MAY BE REQUIRED TO FIT THE WORK TO THE CONDITIONS
- 5. MAINTAIN ALL CLEARANCES AS REQUIRED BY NEC
- 6. SEAL AROUND CONDUITS AND AROUND CONDUCTORS WITHIN CONDUITS ENTERING THE MODULAR CABINETS WHERE PENETRATION OCCURS WITH A SILICONE SEALANT TO PREVENT MOISTURE PENETRATION INTO BUILDING.
- SILICONE SEAL AROUND ALL BOLTS AND SCREWS USED TO SECURE EQUIPMENT TO EXTERIOR OF BUILDING.
- 8. MAKE NECESSARY CONNECTIONS FOR BATTERY IN EMERGENCY LIGHT FIXTURE. CONNECT EXTERIOR LIGHT FIXTURE (PROVIDED BY SHELTER MANUFACTURER) TO EXTERNAL JUNCTION BOX.

C. CONDUCTORS AND CONNECTORS

- UNLESS NOTED OTHERWISE, ALL CONDUCTORS SHALL BE COPPER, MINIMUM SIZE #12 AWG, WITH THERMOPLASTIC INSULATION CONFORMING TO NEMA WC5 OR CROSS—LINKED POLYETHYLENE INSULATION CONFORMING TO NEMA WC7. (TYPES THHN OR THWN). INSULATION SHALL BE RATED FOR 90 CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC.
- 2. ALL CONDUCTORS USED FOR GROUNDING SHALL BE COPPER AND SHALL HAVE GREEN INSULATION.
- 3. FOR COPPER CONDUCTORS #6 AWG AND SMALLER USE 3M SCOTCH-LOK OR T&B STA-KON COMPRESSION TYPE CONNECTORS WITH INTEGRAL OR SEPARATE INSULATION CAPS. FOR COPPER CONDUCTORS LARGER THAN #6 AWG USE SOLDERLESS, IDENT HEX SCREW OR BOLT TYPE PRESSURE CONNECTORS OR DOUBLE COMPRESSION C-CLAMP CONNECTORS, UNLESS SPECIFIED OTHERWISE ON DRAWINGS.
- 4. UNLESS NOTED OTHERWISE ALL LUGS SHALL BE TIN PLATED COPPER, TWO-HOLE, LONG BARREL, COMPRESSION TYPE.
- 5. CONDUCTOR LENGTHS SHALL BE CONTINUOUS FROM TERMINATION TO TERMINATION WITHOUT SPLICES. SPLICES ARE NOT ACCEPTABLE. IF SPLICES ARE UNAVOIDABLE PRIOR APPROVAL FROM THE ENGINEER MUST BE OBTAINED.

D. RACEWAYS AND BOXES

- 1. ALL CONDUIT SHALL BE UL LABELED.
- 2. ALL EMPTY CONDUITS INSTALLED FOR FUTURE USE SHALL HAVE A PULL CORD.
- SHEET METAL BOXES SHALL CONFORM TO NEMA OS1; CAST-METAL BOXES SHALL CONFORM TO NEMA 81 AND SHALL BE SIZED IN ACCORDANCE WITH NEC UNLESS NOTED OTHERWISE.

E. GROUNDING

- ALL SAFETY GROUNDING OF THE ELECTRICAL EQUIPMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT REVISION NEC.
- GROUND LUGS ARE SPECIFIED UNDER SECTION 3 "CONDUCTORS AND CONNECTORS".
- 3. ALL GROUND LUG AND COMPRESSION CONNECTIONS SHALL BE COATED WITH ANTI-OXIDANT AGENT, SUCH AS NO-OX, NOALOX, PENETROX OR KOPRSHIELD.
- 4. GROUND ALL EXPOSED METALLIC OBJECTS ON BUILDING EXTERIOR INCLUDING BUILDING TIE DOWN BRACKETS.
- 5. PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.
- 6. DO NOT INSTALL GROUND RING OUTSIDE OF PROPERTY LINE.
- 7. REMOVE ALL PAINT AND CLEAN ALL DIRT FROM SURFACES REQUIRING GROUND CONNECTIONS, REPAINT TO MATCH AFTER CONNECTION IS MADE TO MAINTAIN CORROSION RESISTANCE.
- 8. ALL EXTERIOR GROUNDING CONDUCTORS INCLUDING EXTERIOR GROUND RING SHALL BE #2 AWG SOLID BARE TINNED COPPER. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. THE RADIUS OF ANY BEND SHALL NOT BE LESS THAN 8" AND THE ANGLE OF ANY BEND SHALL NOT EXCEED 90". GROUNDING CONDUCTORS SHALL BE ROUTED DOWNWARD TOWARD THE BURIED GROUND RING.
- REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY THERMO-WELDING WITH ERICO T-319 GALVANIZING BAR.
- ALL GROUND CONNECTIONS SHALL BE APPROVED FOR THE METALS BEING CONNECTED.
- 11. ALL EXTERNAL GROUND CONNECTIONS SHALL BE EXOTHERMICALLY WELDED. ALL EXOTHERMIC WELDS TO EXTERIOR GROUND RING SHALL BE THE PARALLEL TYPE, EXCEPT FOR THE GROUND RODS WHICH ARE TEE EXOTHERMIC WELDS. REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY EXOTHERMIC WELDING. USE SPRAY GALVANIZER SUCH AS HOLUB LECTROSOL #15-501.
- 12. CONTRACTOR SHALL NOTIFY AT&T WHEN THE BURIED GROUND RING IS INSTALLED SO THE REPRESENTATIVE CAN INSPECT THE GROUND RING BEFORE IT IS BACKFILLED WITH SOIL. CONTACT: AT&T PROJECT MGR.
- 13. FOR METAL FENCE POST GROUNDING, USE A HEAVY DUTY TYPE GROUNDING CLAMP OR EXOTHERMIC WELD CONNECTION TO POST.
- 14. WHERE MECHANICAL CONNECTORS (TWO-HOLE OR CLAMP) ARE USED, APPLY A LIBERAL PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO OXIDE A" BY DEARBORN CHEMICAL COMPANY ON ALL CONNECTORS.
- 15. BOND ALL EXTERIOR CONDUITS, PIPES AND CYLINDRICAL METALLIC OBJECTS WITH A PENN-UNION GT SERIES CLAMP, BLACKBURN GUV SERIES CLAMP OR A BURNDY GAR 3900BU SERIES CLAMP ONLY, NO SUBSTITUTES ACCEPTED.







CARILLON PT

2000 CARILLON POINT KIRKLAND, WA 98033

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B&T ENGINEERING, INC.



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER:

G-1

2





GROUNDING NOTES

- (1) (E) GROUND BUSS BAR, TYP.
- (2) (E) MAIN GROUND CONNECTION POINT. (V.I.F.)
- (3) NOT USED
- (E) #2 STRANDED GREEN INSULATED COPPER GROUNDING LEAD, TYP. (V.I.F.)
- 5 PROPOSED #2 STRANDED GREEN INSULATED COPPER GROUNDING LEAD, TYP.







GROUNDING NOTES

- ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
- 2. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS AND OTHER METALLIC COMPONENTS USING GROUND WIRES AND CONNECT TO SURFACE MOUNTED GROUND BARS. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS AND EXIT FROM TOWER OR POLE USING MFR'S PRACTICES.
- . ALL GROUND CONNECTIONS SHALL BE CADWELD. ALL WIRES SHALL BE COPPER THNN/THWN. ALL GROUND WIRE SHALL BE GREEN INSULATED WIRE ABOVE GROUND.
- CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE. GROUNDING AND OTHER OPERATIONAL TESTING WILL BE WITNESSED BY AN AT&T WIRELESS, LLC. REPRESENTATIVE.
- 5. REFER TO DIVISION 16 GENERAL ELECTRIC; GENERAL ELECTRICAL PROVISION AND COMPLY WITH ALL REQUIREMENTS OF GROUNDING STANDARDS
- ELECTRICAL CONTRACTORS TO PROVIDE DETAILED DESIGN OF GROUNDING SYSTEM, AND RECEIVE APPROVAL OF DESIGN BY AUTHORIZED AT&T WIRELESS, LLC. REPRESENTATIVE, PRIOR TO INSTALLATION OF GROUNDING SYSTEM. PHOTO DOCUMENT ALL CADWELDS AND GROUND RING.
- . NOTIFY CONSTRUCTION MANAGER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.

GROUNDING ROD NOTES

- 1. ELECTRICAL CONTRACTOR SHALL ORDER GROUND RESISTANCE TESTING ONCE THE GROUND SYSTEM HAS BEEN INSTALLED; A QUALIFIED INDIVIDUAL, UTILIZING THE FALL OF POTENTIAL METHOD, SHOULD PERFORM THE TEST. THE REPORT WILL SHOWN THE LOCATION OF THE TEST AND CONTAIN NO LESS THAN 9 TEST POINTS ALONG THE TESTING LINE, GRAPHED OUT TO SHOW THE PLATEAU.
- POINT GROUND TEST OR 3 POINT 62% TESTS WILL NOT BE ACCEPTED AS ALTERNATIVES TO THE AFOREMENTIONED GROUND TESTS. TEST SHALL BE PERFORMED WHILE THE COUNTERPOISE IS ISOLATED FROM THE A/C SYSTEM GRIDS AND EXISTING COMMUNICATIONS FACILITY.

LEGEND

- ⊗ COPPER GROUND ROD
- SROUND INSPECTION WELL
- ◆ COMPRESSION LUG
- CADWELD CONNECTION
- MECHANICAL CONNECTION
- — GROUND WIRE
- III VERIFY & TIE INTO EXISTING GROUNDING SYSTEM

CARILLON PT

2000 CARILLON POINT KIRKLAND, WA 98033

EXISTING ROOFTOP

PROJECT NO: 90140.00

CHECKED BY: LRT

ISSUED FOR:

Ш				
į	REV	DATE	DRWN	DESCRIPTION
į	Α	4/24/14	DGJ	PRELIMINARY REVIEW
ij	В	8/26/14	DGJ	PRELIMINARY REVIEW
į	0	8/27/14	DGJ	CONSTRUCTION
i	1	11/14/14	DGJ	CONSTRUCTION
ill	2	1/6/15	DGJ	NEW RFDS

B&T ENGINEERING, INC.



IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTI OF A LICENSED PROFESSIONAL ENGINEER,

SHEET NUMBER:

G-2

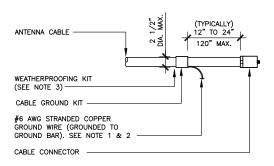
2

NOTE:

ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH PROJECT MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.

CADWELD GROUNDING CONNECTIONS

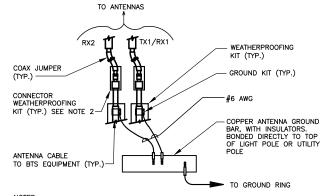
SCALE: N.T.S.



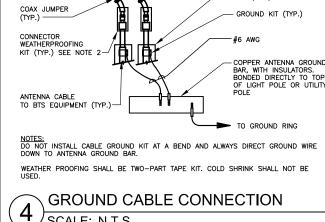
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
- WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

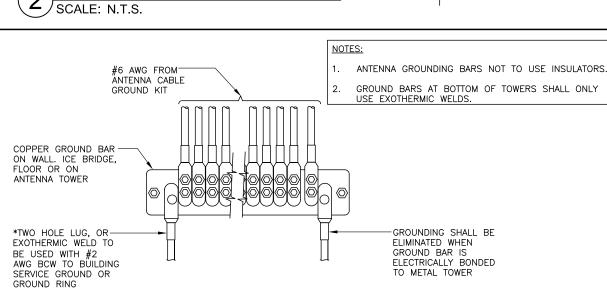
CABLE GROUND KIT CONNECTION

SCALE: N.T.S.



GROUND CABLE CONNECTION SCALE: N.T.S.





GROUNDWIRE INSTALLATION SCALE: N.T.S.

WIRE SIZE

#2 AWG SOLID TINNED

#2 AWG STRANDED

#2/0 AWG STRANDED

#4/0 AWG STRANDED

SPECIFICATIONS.

NOTES:

BURNDY LU

#6 AWG GREEN INSULATED YA6C-2TC38 3/8" - 16 NC S 2 BOLT

YA28-2N

ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER,

GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

COPPER SHIELD, ANTIOX, CR NO-OX OR EQUIVALENT

SHALL BE PLACE WHERE ALL DISSIMILAR METALS CONNECT.

MECHANICAL LUG CONNECTION

ALL LUGS ARE TO BE INSTALLED PER MANUFACTURER'S

BOLT SIZE

1/2" - 16 NC S 2 BOLT

YA3C-2TC38 3/8" - 16 NC S 2 BOLT

YA2C-2TC38 3/8" - 16 NC S 2 BOLT

YA26-2TC38 3/8" - 16 NC S 2 BOLT

BURNDY GROUND LUG

(SEE TABLE FOR SIZE

LOCK WASHER (TYP.)

GROUND BAR-

-BOLT (TYP.)

BURNDY TWO HOLE LUG WITH LONG BARREL FOR #6 AWG

STRANDED OR EQUIVALENT

NO-OX AT BOTH ENDS

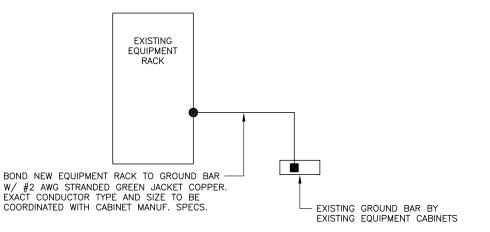
BARE WIRE TO BE

#6 AWG STRANDED

GREEN INSULATED

AND MODEL)

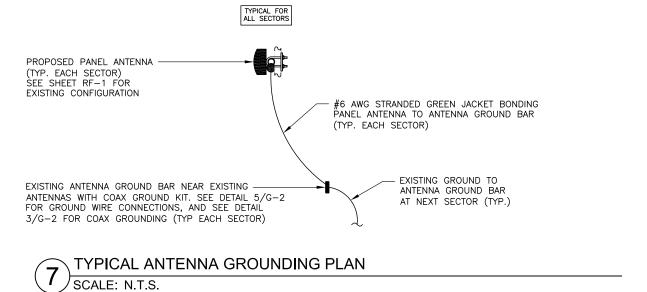
NUT (TYP.)



, TYPICAL EQUIPMENT AREA GROUNDING PLAN

SCALE: N.T.S.

6





HEAT SHRINK

(CLEAR)

-GROUNDING

CONDUCTOR





CARILLON

2000 CARILLON POINT KIRKLAND, WA 98033

> **EXISTING** ROOFTOP

PROIECT NO 90140,001 CHECKED BY: LRT

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ı	ij	2	1/6/15	DGJ	NEW RFDS								

B&T ENGINEERING, INC.



SHEET NUMBER:

	EXISTING ANTENNA CONFIGURATION AND SCHEDULE										FINAL ANTENNA CONFIGURATION AND SCHEDULE																	
SECTOR X	AZIMUTH	RAD CENTER	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC.	MECH. TILT	RET	TMA	NUMBER OF FEEDERS	FEEDER TYPE	FEEDER LENGTH	DIPLEXED	SECTOR X	AZIMUTH	RAD CENTER	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC. TILT	MECH.	RET	TMA	RRH'S QTY	NUMBER OF FEEDERS	FEEDER TYPE	FEEDER LENGTH	DIPLEXED
LTE 700	120°	65'-0"	1	KMW	AM-X-CD-16-65-00T-RET	4.	0.	YES	-	1	FIBER	315'	NO	LTE 700	120	65'-0"	1	ALU AA	3JR52702AAAA	4.	0.	YES	_	1 (INT)	1	FIBER	315'	NO
GSM 850	120	65'-0"	1	KATHREIN	742-264	0,	-3*	YES	(2) CS72993.08	2	7/8"	190'	YES	LTE 1900	120	03 =0	'	ALO AN	0011027027444	3*	•	YES		1 (EXT)	'	TIBEN		
GSM 1900						0,		YES			•			GSM 850	120*	65'-0"	1	KATHREIN	742-264	0.	-3.	YES	(2) CS7993.08	_	2	7/8"	190'	YES
UMTS 850	140°	65'-0"	1	KATHREIN	742-264	0.	−3 °	YES YES	(2) LGP 21401	2	7/8"	190'	YES	GSM 1900						0°		YES						
UMTS 1900			NUMBER OF				MECH.			NUMBER OF	FFFDFR	FEEDER		UMTS 850	140°	65'-0"	1	KATHREIN	742-264	0°	-3°	YES	(2) LGP 21401	-	2	7/8"	190'	YES
SECTOR Y	AZIMUTH	RAD CENTER	ANTENNAS	VENDOR	MODEL	ELEC. TILT	TILT	RET	TMA	FEEDERS	FEEDER TYPE	LENGTH	DIPLEXED		4.715.41.1T1.1	DAD OFNITED	NUMBER OF	VENDOD	HODE	ELEC.	MECH.	DET	TMA	RRH'S	NUMBER OF	FEEDER	FEEDER ,	
LTE 700	210*	65'-0"	1	POWERWAVE	P65-17-XLH-RR	6,	2*	YES	-	1	FIBER	315'	NO	SECTOR Y	AZIMUTH	RAD CENTER	ANTENNAS	VENDOR	MODEL	TILT	TILT	RET	IMA	QTY	FEEDERS	FEEDER TYPE	LENGTH	DIPLEXED
UMTS 850 UMTS 1900	210°	65'-0"	1	KATHREIN	742-264	8°	0.	YES YES	(2) LGP 21401	2	7/8"	190'	YES	LTE 700 LTE 1900	210°	65'-0"	1	ALU AA	3JR52703AAAA	7°	2.	YES YES	-	1 (INT) 1 (EXT)	1	FIBER	315'	NO
GSM 1900	210°	65'-0"	1	POWERWAVE	7721	3*	0,	YES	(2) CS72993.08	2	7/8"	190'	YES	UMTS 850						8.		YES	(-)		_	_ /- 1		
GSM 850	210°	65'-0"	1	KATHREIN	739-684	7*	0,	YES	-	-	_	-	NO	UMTS 1900	210*	65'-0"	1	KATHREIN	742–264	4.	1 %	YES	(2) LGP 21401	-	2	7/8"	190'	YES
SECTOR Z	AZIMUTH	RAD CENTER	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC. TILT	MECH. TILT	RET	TMA	NUMBER OF FEEDERS	FEEDER TYPE	FEEDER LENGTH	DIPLEXED	GSM 1900	210°	65'-0"	1	POWERWAVE	7721	3*	0,	YES	(2) CS7993.08	-	1	7/8"	190'	YES
LTE 700	20°	65'-0"	1	KATHREIN	80010764	3.	2.	YES	_	1	FIBER	315'	NO	GSM 850	210*	65'-0"	1	KATHREIN	739 684	7*	0,	YES	-	-	1	7/8"	190'	YES
GSM 850	7701		_			8.	- ·	YES	(0) 0070007.00		7 /0"		VE0.	SECTOR Z	AZIMUTH	RAD CENTER	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC. TILT	MECH. TILT	RET	TMA	RRH'S QTY	NUMBER OF FEEDERS	FEEDER TYPE	FEEDER LENGTH	DIPLEXED
GSM 1900	330*	65'-0"	'	KATHREIN	742-264	4*	0	YES	(2) CS72993.08	2	7/8"	190'	YES	GSM 850	7701	051 07		I/ATUDEN	740,004	8.		YES	(-)	1 (INT)		7 /0"		
UMTS 850	20*	65'-0"	1	KATHREIN	742-264	8.	4.	YES	(2) LGP 21401	2	7/8"	190'	YES	GSM 1900	330	65'-0"	1	KATHREIN	742-264	4.	1 "	YES	(2) CS7993.08	1 (EXT)	2	7/8"	190'	YES
UMTS 1900	20	05 -0	'	NATHINEH	7 72-204	4*	-7	YES	(2) 201 21401		.,,	190	163	LTE 700	20*	65'-0"	1	ALU AA	3JR52703AAAA	2*	2.	YES	_	1	1	FIBER	315'	NO
														LTE 1900	20	05 -0	'	ALU AA	301(32703A44A	3*		YES		'	'	TIDER	313	.,,,
														UMTS 850	20*	65'-0"	1	KATHREIN	742–264	8*	4.	YES	(2) LGP 21401	_	2	7/8"	190'	YES
1				NOTE:					7					UMTS 1900		35 0	<u> </u>		•••	4*		YES	,		-	, -		







CARILLON PT

2000 CARILLON POINT KIRKLAND, WA 98033

EXISTING ROOFTOP

li	PROJECT NO:	90140.001
	CHECKED BY:	LRT

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B&T ENGINEERING, INC.

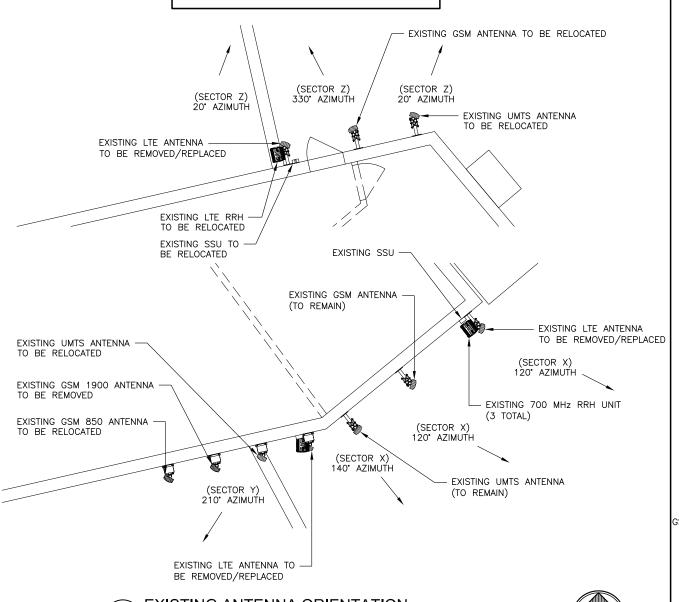


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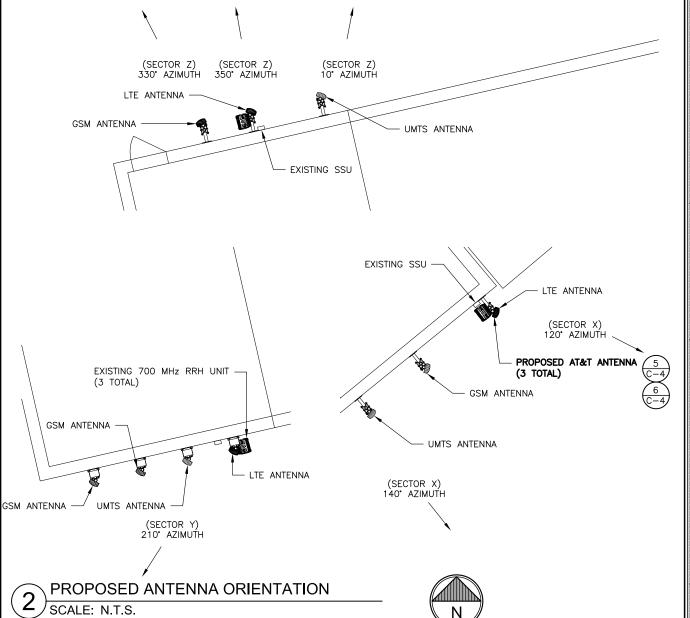
SHEET NUMBER:

REVISION:

NOTE:
ALL ANTENNAS, MOUNTS AND EQUIPMENT ON Y AND Z
SECTORS TO BE RELOCATED. ALL WALL PENETRATIONS
ARE TO BE FILLED AND WEATHER SEALED.



1 EXISTING ANTENNA ORIENTATION SCALE: N.T.S.







Jurisdiction: KIRKLAND **Project Name:** SB13 Carillon Pt **Application ID:** 236437



Enter Full Name of Person(s) Agreeing with Statements Above:

Jesse London